

FUNCTION OF WORD ORDER IN MANDARIN CHINESE

By

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TABLE OF CONTENTS

	<u>page</u>
ACKNOWLEDGEMENTS.	ii
KEY TO SYMBOLS.	vii
ABSTRACT.	viii
CHAPTERS	
I INTRODUCTION.	1
1.1 Topic	1
1.2 Topic in Chinese.	2
1.3 Topic Continuity and Word Order	5
1.4 Topic Continuity in Mandarin Chinese.	8
1.5 Organization of the Dissertation.	10
Notes	11
II REVIEW OF LITERATURE	12
2.1 Chao's Subject.	12
2.1.1 Subject and Predicate	12
2.1.2 Definiteness.	17
2.1.3 Comments on Chao	18
2.2 Li and Thompson's Topic	20
2.2.1 Topic and Subject	20
2.2.2 Topic in Discourse.	21
2.2.3 Comments on Li and Thompson	24
2.3 Tsao's Interclausal Study	25
2.3.1 Tsao's Topic.	26
2.3.2 Topics at More Levels	27
2.3.3 Comments on Tsao.	30
2.4 Sun and Givon's Text Analysis	31
2.4.1 Definiteness and Word Order	32
2.4.2 Topic Accessibility and Word Order.	33
2.4.3 Comments on Sun and Givon	35
2.5 Summary	36
Notes	37
III FORMAL DESCRIPTION OF WORD ORDER IN MANDARIN CHINESE	38
3.1 Phrases, Clauses, and Sentences	38

3.2 Simple Structures	40
3.3 Structures with Two or More VPs	44
3.4 Structures with Two or More Preverbal NPs	47
3.5 Structures with Two or More Postverbal NPs.	49
3.6 Structures with Two or More PPs	51
3.7 Afterthought and Raising Sentences.	53
3.8 Word Order Typology of Mandarin Chinese	54
3.9 Summary	58
Notes	59
IV SEMANTIC CONSTRAINTS ON WORD ORDER.	61
4.1 Case Roles and Word Order	61
4.1.1 Case Roles in Mandarin Chinese.	62
4.1.2 One Preverbal NP or PP.	63
4.1.3 Two or More Preverbal NPs or PPs.	66
4.1.4 Two or More Postverbal NPs or PPs	72
4.2 Scope and Word Order.	74
4.2.1 Preverbal NPs or PPs.	75
4.2.2 NPs or PPs Separated by Verb.	78
4.2.3 <u>Ba</u> -Sentences and <u>Bei</u> -Sentences.	79
4.3 Temporal Sequence and Word Order.	81
4.3.1 Principle of Temporal Sequence.	82
4.3.2 Position of PPs	83
4.3.3 Position of NPs	85
4.4 Interrelation Between Semantic Factors.	88
4.5 Summary	89
Notes	90
V DEFINITENESS AND WORD ORDER	92
5.1 Unquantified NPs.	92
5.2 Quantified NPs.	95
5.3 Definiteness Effects Between NPs.	99
5.4 Definiteness and Word Order in Texts.	102
5.5 Summary	109
Notes	110
VI TOPIC STRUCTURES	111
6.1 Formal Features of Topic.	111
6.2 Semantic and Discourse Features of Topic.	115
6.2.1 Case Roles.	115
6.2.2 Scope and Temporal Sequence	119
6.2.3 Definiteness.	122
6.3 Transformational Approach	124
6.4 Sentences with One Topic.	129
6.5 Sentences with Two or More Topics	131
6.5.1 Two or More Preverbal NPs or PPs.	131
6.5.2 <u>Ba</u> -Sentence and <u>Bei</u> -Sentence.	132

6.5.3 Resultative and Descriptive Complements . . .	133
6.6 Shi...De Structure.	136
6.6.1 Shi and De.	136
6.6.2 Huang's Analysis.	137
6.6.3 Topic-Comment Analysis.	138
6.7 Summary	141
Notes	142
VII WORD ORDER AND INTERCLAUSAL COHESION	144
7.1 Textual Cohesion.	144
7.1.1 Organization of Text.	144
7.1.2 Topic Continuity.	147
7.2 Word Order and Topic Continuity	149
7.2.1 Word Order in English	149
7.2.2 Word Order in Chinese	151
7.3 Word Order in Topic Chains.	152
7.3.1 NP-V-NP in First Clause	153
7.3.2 Ba in First Clause.	158
7.3.3 Topicalized Structure in First Clause . . .	163
7.3.4 Other Topic Chains.	167
7.4 Word Order in Sentence Groups	171
7.4.1 Sentences Forming a Topic Chain	171
7.4.2 Sentences Linked by Topic Chains.	173
7.5 Summary	174
Notes	175
VIII TEXTUAL ANALYSIS OF WORD ORDER	178
8.1 Topic Continuity.	178
8.2 Data and Methodology.	180
8.3 Clause Types Surveyed	183
8.4 Results and Discussion.	184
8.4.1 NP-V or NP-V-S.	184
8.4.2 NP-V-NP	186
8.4.3 Topicalized Clauses	187
8.4.4 Clauses with PPs.	189
8.4.5 Phonological Size and Word Order.	191
8.5 Summary	193
Notes	194
IX LEARNING BETWEEN CHINESE AND ENGLISH	195
9.1 Interference in Syntax.	195
9.1.1 Learning Chinese Word Order	195
9.1.2 Learning English Word Order	201
9.2 Topic and Definiteness in Chinese and English .	203
9.3 Learning Chinese Discourse.	206
9.4 Learning English Discourse.	215
9.5 Summary	219
Notes	220

X CONCLUSION	.223
APPENDIX	.227
REFERENCES	.237
BIOGRAPHICAL SKETCH.	.245

KEY TO SYMBOLS

BA:	patient marker <u>ba</u>
BEI:	agent marker <u>bei</u>
COM:	comment
DE:	subordinate marker <u>de</u>
DIR:	directional verb
DUR:	duration marker
EXP:	experiential aspect marker
INT:	interjection
JIANG:	patient marker <u>jiang</u>
LE:	aspect marker <u>le</u>
M:	measure word
MOD:	modifier marker
NOM:	nominalizer
NP:	noun phrase
POSS:	possessor marker
PP:	prepositional phrase
Q:	question marker
SHI:	copular verb <u>shi</u>
TOP:	topic
VP:	verb phrase
YOU:	agent marker <u>you</u>

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FUNCTION OF WORD ORDER IN MANDARIN CHINESE

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This dissertation is a study of word order in Mandarin Chinese in the aspects of syntax, semantics, and discourse.

The position of a phrase in a clause is subject to certain formal rules, which can be generalized. But the formal description is not sufficient to account for the word order patterns in Chinese. Semantic factors such as case roles, semantic scope, and temporal sequence also limit the choice of different word order patterns. At the level of discourse, the choice of different word orders in the individual clauses is determined by the requirements of textual cohesion.

The case role that a phrase bears to the verb may affect its position in a clause. For instance, an agent noun phrase is more likely to appear earlier than a patient noun phrase. The semantic scope of a phrase as compared to the

semantic scope of the other phrase(s) in the same clause is also relevant to its position. It is more likely for a phrase bearing greater scope to occur before those bearing less scope. The effects of temporal sequence are indicated by the tendency in Chinese to place the phrase representing an earlier event before those representing later events. The correlation between definiteness and word order can be regarded as a conceptualized temporal sequence in the speaker's mind.

The discourse function of word order is shown in the choice of different topic structures in different contexts. In a topic chain, the interpretation of the higher topic is related to the coding of the lower topics in the individual clauses. In a text, the topicality of a noun phrase affects its position in a clause. Such phenomena are distinctly shown in an examination of paragraphs written by second language learners where a clause is grammatical in terms of syntax but may turn out to be inappropriate in the given context.

CHAPTER I INTRODUCTION

Word order and discourse are related to each other in a complicated way. In order to account for syntactic structures with various word orders, it is often necessary to examine word order in light of its function in discourse.

The relationship between the word order of a clause and the topic continuity of its individual elements in discourse is one of the serious questions facing linguists working with Chinese. The current research is an attempt to describe the interrelation between word order and discourse from three aspects: syntax, semantics, and discourse. The syntactic description illustrates the word order typology of Chinese and deals with the formal properties of the syntactic structures of individual declarative sentences. The semantic description relates word order in a clause to such semantic factors as case roles, temporal sequence, scope, and definiteness. Textual analysis focuses on topic continuity in discourse as an important factor in determining the word order of the individual clauses.

1.1 Topic

Sapir (1921:11) used the term "subject of discourse" to refer to what is talked about. The term "topic" is used for

the same meaning in many other studies (cf. Hockett 1958:201; Vennemann 1975; Bates and MacWhinney 1982:199; Littlejohn 1983; and Gumperz 1982:199). In this study, the term topic is only used for an entity that is actually expressed in discourse (Halliday & Hasan 1976:331; Beaugrande and Dressler 1986:94), and is what a sentence or clause is about (Chafe 1975).¹ This definition of topic is similar to the theme as defined in Lyons (1977:506) and the "topic entity" in Brown and Yule (1985:79).² It may also set the temporal, spatial or individual framework within which the main predication holds (Li & Thompson 1981:85-91) and functions as the reference framework (Barry 1975:79) or the framework of discourse (Brown and Yule 1985).

1.2 Topic in Chinese

In Chao (1968:70), the term "subject" and "predicate" are considered equivalent to topic and comment respectively. The subject or topic of a sentence is what one talks about and the predicate or comment is what one says to comment on the subject or topic. In Li and Thompson (1981:92), topic has two meanings: what a sentence is about, or what sets the stage for the rest of the sentence. Chu (1984a:132) discusses the notion in terms of larger units of discourse and suggests that topic is something that is most familiar to the participants in communication to which more information can be added.

The topic in a sentence or clause has several features. In form, it usually takes initial position and can be separated from the rest of the sentence or clause by a pause or pause article. In discourse, it usually refers to an entity which is definite or generic.

The topic in a Chinese sentence or clause usually takes the initial position, and behaves like the "theme" defined by Brown and Yule (1985). Observe the examples in (1.1).

- (1.1) a. Ta na lai le shu.
he take come LE book

"He brought (the) book(s)."

- b. Shu ta na lai le.
book he take come LE

"The book(s), he brought here."

In both (1.1a) and (1.1b), the noun phrase ta "he" has the same semantic case role of agent, and the noun phrase shu "book(s)" has the same semantic case role of patient. But the two sentences have different topic structures. The initial position is usually used to code the primary topic of a sentence or clause. In (1.1a), the primary topic is ta. In (1.1b) the primary topic is shu. It is also permissible to place a pause particle after the sentence or clause topic. In (1.1), a pause particle like a, ma, ba, or ne is always possible after ta. In spoken language, a pause may be used instead.

Chao (1964) already noticed that word order is related to definiteness in Chinese. In (1.1a), the noun phrase shu "book" can be interpreted with either a definite or indefinite reference, as the English translation shows. But the same noun phrase shu "book," which is placed at the beginning in (1.1b), must be interpreted with a definite reference. The definiteness of a noun phrase depends on the linguistic or extralinguistic contexts in which the sentence or clause appears.

Therefore, early occurrence, definiteness, and topicality normally correlate in Chinese. The more definite or the more topical (in terms of topic continuity and textual cohesion) a noun phrase is, the more likely it will take the initial position in a sentence or clause.

A topic may have no case role relation, i.e. agent, patient, etc., with the main verb in the comment part. For instance, in (1.2), the noun phrase pingguo "apple" only has a loose semantic relation with the verb jia "add" or dengyu "equal to."

- (1.2) Pingguo yi jia yi dengyu er.
apple one add one equal two

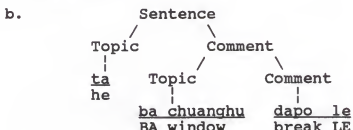
"As for the apples, one plus one equals two."

The hierarchical structure of topic and comment is also discussed by Chu (1984a:227) and Tsao (1987a). This means that a sentence or clause in Chinese may have more than one topic-comment structures. The tree diagram in (1.3b) shows

that ta "he" is the higher topic, with the rest of the sentence as its comment. Within the comment, chuanghu "window" is the topic, and dapo le "broke" is its comment. Thus the sentence in (1.3a) has two layers of topic-comment structures.

- (1.3) a. Ta ba chuanghu dapo le.
he BA window break LE

"He broke the window."



1.3 Topic Continuity and Word Order

Givon (1983), in his study of one-way communication, focuses on individual noun phrases referring to topic entities in discourse, and describes textual cohesion in terms of the accessibility of the individual noun phrases. According to Givon, the more accessible a noun phrase is to the reader, or the easier for the reader to decode the reference of the noun phrase, the more continuous it is in terms of topicality. Brown and Yule (1985:89), in their analysis of two-way communication, illustrate how the topic framework can be negotiated and developed in the process of communication. The development of the topic framework is

thus the result of a compromise between the participants in communication.

A too frequent change of topics can result in the lack of cohesion, for the noun phrases all show a low degree of topic continuity. If the topic of individual clauses changes too fast, the reader may find it difficult to follow. The speaker or writer then does not show enough consideration of topic continuity according to Givon's theory of textual analysis, or of the reader in terms of Brown and Yule's theory of topic framework negotiation. If the topic of individual sentences or clauses changes slowly, or does not change at all, then the topic continuity of individual entities is higher, and the text is more cohesive.

The English example in (1.4a) shows that the frequent change of clause topics in a paragraph can lead to the low degree of cohesion and the interruption of discourse flow. The corrected paragraph in (1.4b) becomes a more natural text (Brown and Yule 1985:128).

- (1.4) a. It's the sun that's shining, the day that's perfect. The astronauts come here. The Great Hall they're just passing; he'll perhaps come out to greet them, the President. No, it's the ceremony that the admiral's taking...
- b. The sun is shining, it's a perfect day. Here come the astronauts. They are just passing the Great Hall; perhaps the President will come out to greet them. No, it's the admiral who's taking the ceremony....

The propositional content is the same in (1.4a) and (1.4b).

But as Brown and Yule (1985:129) comment, "it is hard for

the processor to construct a coherent model of what is going on from the text" in (1.4a).

The reason is clear. The paragraph in (1.4a) changes the sentence or clause topic and focus too frequently. The clause topics are shining and perfect respectively in the two clauses of the first sentence. Then the topic is changed to the astronauts in the second sentence. In the third sentence, it becomes the Great Hall. It is President and then the admiral in the last two sentences. In contrast, (1.4b) is more cohesive when different word order patterns are used for individual clauses in the paragraph. In the first sentence of (1.4b), the weather is introduced, and then the clause topic here, which is related to the situation described by the first sentence, introduces a new topic astronauts in an inverted word order. The next sentence continues to describe the astronauts as the clause topic, and the newly introduced the Great Hall points to the President in the next sentence. The last sentence in (1.4b) uses the cleft structure to achieve the effect of counter expectation by focusing on the admiral in contrast with the President.

Lyons (1977:26ff) emphasizes the difference between the two types of sentences: system-sentences and text-sentences. System-sentences are the structures which are grammatical in a language. Text-sentences are the sentences that are actually used in discourse. While it is necessary to

describe various system-sentences, i.e. the possible syntactic structures, it is also necessary to describe the text-sentences, i.e. the syntactic structures that are actually used in discourse.

1.4 Topic Continuity in Mandarin Chinese

Chinese, like other languages, is subject to formal constraints as to what word order is possible for a sentence or clause. One cannot arrange the word order of lexical items freely without considering their categories. Even the relevant order between noun phrases can also be largely predicted in formal terms.

But Chinese arranges words not only according to their categories, i.e. whether a given form is a noun or verb, but also dependent on their function in discourse. Chinese is called a topic-comment language partly because it almost always places the most topical element in the initial position of a sentence or clause. To illustrate, let's look at the examples in (1.5).

- (1.5) a. Ta na lai le shu, ____ meiyou yisi.
he take come LE book not interesting

"He brought the/a book, (he/??the book/?his bringing the book) is not interesting."

- b. Shu ta na lai le, ____ meiyou yisi.
book he take come LE not interesting

"The book(s), he brought here, (and) are not interesting."

There are two clauses in each of (1.5a) and (1.5b). The second clauses are of the same form. As the topic of each has been mentioned in the first clause, it is therefore suppressed in the second clause (the position is marked by ____). Yet, the two sentences are different in the word order of the first clause. In (1.5a), the pronoun ta "he" is in the initial position of the first clause and is most likely the antecedent of the suppressed pronoun in the second clause. Other possibilities also exist. As the English translation shows, the topic for the whole sentence in (1.5a) is most likely interpreted as ta "he," less likely as shu "book" or ta na lai le shu "(the fact that) he brought the/a book)." The latter two interpretations require more specific contexts than represented here. In (1.5b), however, the noun phrase shu "book" in the initial position, instead of the object position usually demanded by its patient role, is the primary topic of the first clause and must be interpreted as the antecedent of the zero pronoun in the second clause, and thus as the higher topic of the whole sentence.

Both clauses are possible system clauses in Chinese. But the choice of one over the other affects the interpretation of, or depends on, the higher topic of the whole sentence. The first clause in (1.5a) does not block the other elements from becoming the topic of the higher sentence. But the first clause in (1.5b) with a "topicalized

structure," where the patient shu "book" is placed at the beginning, blocks the other elements from becoming the sentence topic. This is further illustrated in (1.6), where a different predicate/comment is used in the second clause. The sentence in (1.6a) is appropriate, since ta "he" can be

- (1.6) a. Ta na lai le shu, — jiu hui jia le.
he take come LE book — then return home LE

"He brought the/a book, then (he) went home."

- b. *Shu ta na lai le, — jiu hui jia le.
book he take come LE — then return home LE

"He brought the book, then (the book) went home."

easily interpreted as the suppressed argument, and thus the topic, of the verb phrase hui jia "go home" in the second clause. The sentence in (1.6b) is not so easily interpreted, since it is difficult to make shu "book" the argument, or a semantically related topic, of the verb phrase hui jia "go home."

1.5 Organization of the Dissertation

After this introduction, Chapter II reviews some of the studies related to topic and word order in Mandarin Chinese. Chapter III introduces the formal characteristics of word order in Mandarin Chinese. Chapter IV considers word order with respect to the semantic case roles, temporal sequence, and scope. Chapter V focuses on the relationship between definiteness and word order. Chapter VI describes various

topic structures in Mandarin Chinese. Chapter VII relates the topic of the individual clauses to the topic of the higher discourse unit of topic chain. Chapter VIII examines the relationship between word order and topic continuity in written texts. Chapter IX uses data from second language acquisition to further bring out the functions of word order in Mandarin Chinese. Finally, Chapter X draws some conclusions from the study and points out questions that need further investigation.

Notes

¹The idea of sentence topic is so influential that Chomsky (1965:221) also considered the possibility that topic-comment structure might be a basic grammatical relationship in surface structure.

²Lyons (1977:506) uses both theme and topic for the same notion: what is being talked about in a sentence. Brown and Yule (1985:79) treats topic as "topic framework" and regards the actually occurring topic as "topic entity."

CHAPTER II REVIEW OF LITERATURE

This chapter will review four studies on the function of word order in Mandarin Chinese: Chao's structuralist description of subject in Section 2.1, Li and Thompson's functional approach to topic and subject in Section 2.2, Tsao's interclausal study of topic in Section 2.3, and Sun and Givon's textual analysis of topic accessibility in Section 2.4.

2.1 Chao's Subject

Chao (1968) is a comprehensive description of Mandarin Chinese in a structuralist framework. This section will briefly introduce his notion of subject 2.1.1 and his observation of definiteness 2.1.2, and then comments on his ideas 2.1.3.

2.1.1 Subject and Predicate

According to Chao (1968:67), the immediate constituents of a full sentence are subject and predicate. He defines the grammatical meaning of subject and predicate in a Chinese sentence as that of topic and comment, rather than actor and action (pp. 70-71). The subject in a sentence is "the subject matter to talk about," and the predicate is "what

the speaker comments on when the subject is presented to be talked about" (p. 70). Formally, the subject takes the initial position and can be separated from the rest of the sentence by a pause or a pause particle, e.g. a, ne, ba, or ma. His notion of subject is so broad as to include nominal expressions (2.1a), verbal expressions (2.1b), time, place, and condition expressions (2.1c), actor subjects introduced by a preposition (2.1d), other prepositional phrases (2.1e), and subject-predicate subjects (2.1f) (pp. 83-87).¹

- (2.1) a. Tamen shang nar?
they go to where

"Where are they going?"

- b. Zhan zhe bu dong hen nan.
stand DUR not move very difficult

"Standing without moving is very difficult."

- c. Ta daoqian de shihou, women jiu suan le.
he apologize MOD time we then let it go LE.

"When, --if, he apologizes, we will let it go."

- d. You zhuxi zhaoji huiyi.
YOU chairman convene meeting

"(It is) through the chairman (who) convenes the meeting."

- e. Weile zhe shiqing wo zhen fachou.
for this matter I really worried

"On account of this I am really worried."

- f. Ta bu lai ye cheng.
he not come also OK

"That he will not (or may not) come is all right, too."

All the underlined parts regarded as subjects in (2.1) precede the predicates and are topics in discourse. Here Chao concretely shows the topic-prominence in Mandarin by bringing out the close correlation between the topic and the sentence or clause initial position. The only exception to this correlation is in the case of the afterthought sentences (2.2) (p. 69).

- (2.2) Yao shui le, wo.
will sleep LE I

"Want to sleep, I (do)."

As Chao (ibid) points out, the inverted subject in afterthought sentences like (2.2) has only a neutral tone, which distinguishes it from a predicate. Later in Section (6.5), we will see that this type of sentences can be regarded as composed of an inverted topic and comment (Packard 1986).

There may be topic-comment structures at different levels in a sentence. For instance, the double-subject sentences, inverted-object sentences, and verb-complement sentences all have more than one subject, as in (2.3).

- (2.3) a. Zhe ge ren naojin jiandan. (p. 98)
this M person mind simple.

"This man (is such that his) mind is simple."

- b. Wo jiu xianzai bu he le. (p. 103)
I wine now not drink LE

"I am not going to drink wine now."

- c. Wanbao Lao San na qu le. (p. 103)
evening paper Lao San take away LE

"(As for) the evening paper, Lao San took (it) away."

- d. Ni chang de haoting. (p. 357)
you sing DE beautiful

"As for you, the way of singing is beautiful."

In (2.3a), the higher subject is zhe ge ren "this person," and the lower subject is nao jin "mind." In (2.3b), the higher subject is wo "I" and the lower subject is the "inverted object" jiu "wine." In (2.3c), the higher subject is the "goal word" wanbao "evening paper," which can also be considered a preposed object, and the lower subject is Lao San "Lao San." In (2.3d), the higher subject is ni "you" and the lower subject is chang de "singing."² In all the examples in (2.3), the hierarchical structure of subject and predicate is also correlative to the position of the elements in a sentence, i.e., the higher subject takes an earlier position than a lower subject.

Chao also illustrates various semantic relationships between the subject and predicate. The relationship may be that of actor and action as in (2.1a), object and verb as between the lower subject and the lower predicate in (2.3b), goal and action or event as in (2.3c), or time/location/condition and action or event as in (2.1c). The semantic relationship between the main subject and the minor subject in the double-subject sentence may be that of

possessor-possessioned, whole-part, or class-member, the first being shown in (2.3a).

Sometimes it is difficult to define the relationship between the subject and predicate, as (2.4) illustrates. In (2.4a), "she" is not "an American husband," but only is married to one. In (2.4b), it is ambiguous as to whether the "fish" has eaten something else, or it has been eaten.

- (2.4) a. Ta shi yi ge Meiguo zhangfu. (p. 71)
she be a M America husband

"She is (a case of being married to) an American husband."

- b. Yu chi le. (p. 75)
fish eat LE

"The fish has eaten."

"The fish has been eaten."

Chao realizes that most of the difficulty faced by the linguists in interpreting the semantic relationship between the subject and predicate comes from their description of sentences like (2.4b) in isolation (p. 75). Although he himself deals with the language mostly represented by isolated sentences in Chao (1968), in a few cases he resorts to linguistic or extralinguistic contexts for a better explanation. He emphasizes (p. 75), for instance, the notorious (2.4b) has "no more and no less ambiguity in spoken Chinese than in most other languages spoken" in a given context.

2.1.2 Definiteness

Definiteness is related to the position of the noun in the clause. As Chao points out, the subject "usually" refers to something definite (2.5a) while an object usually refers to something indefinite (2.5b) (1964:51).

- (2.5) a. Shu zai nar?
book at where

"Where is the book?"

- b. Nar you shu?
where there be book

"Where is there a book?"

The noun shu "book(s)" is definite in (2.5a) where it is the subject while it is indefinite in (2.5b) where it is an object. This is because the subject tends to represent what is already known and the predicate where the object is located adds something new (1968:76).

The particle ba, which he calls a "pretransitive" (p. 77) also has the function of marking the following noun phrase definite, as shown in (2.6) (Chao 1964:206).

- (2.6) a. Ni dei he wan le shui zai zou.
you must drink finish LE water and then leave

"You must finish drinking some water (any water) before you go."

- b. Ni dei ba shui he wan le zai zou.
you must BA water drink finish LE and then leave

"You must finish drinking the water (that you meant to drink, served on the table, etc.) before you go."

He observes (1968:76-77) that it is the position, rather than the function of subject or object, that makes a noun definite or indefinite.

Definiteness is so closely related to earlier occurrence in a sentence that a noun phrase, even already marked by a definite determiner, still tends to appear in an earlier position. This is the case with the noun phrase zhe ber shu "this book" in (2.7).

- (2.7) a. Wo ba zhe ber shu kan wan le.
I ba this M book read finish LE

"I have finished reading this book."

- b. Zhe ber shu wo kan wan le.
this M book I read finish LE

- c. Wo kan wan le zhe ber shu.
I read finish LE this M book

According to Chao (1964:51; cf. 1968:76), the structures in (2.7a) and (2.7b) are preferred over (2.7c) since the definite object zhe ber shu "this book" tends to occur earlier.

2.1.3 Comments on Chao

Chao's subject can be used for some other structures. For instance, the noun phrase marked by ba can be regarded as a lower subject, considering the fact that it usually has a definite reference. The structures with bei can be treated

in a similar way (cf. Section 3.3.2). It has not been discussed how the topics (subjects) at the same level can be conjoined (cf. Section 2.3 for Tsao's treatment of the comparative bi). Nor is the use of shi, a focus marker, related to that of de, a presupposition marker (cf. Chu 1985).

Chao (1968:77) realizes that a preverbal question word or duplicated noun is used to refer to "every member of a class," but he treats them as with "definite reference," maybe due to the close relationship between generic and definite reference (cf. Givon 1984). This would be confusing, since those noun phrases are generic, i.e. nonreferential, and function quite differently from referential definite nouns.

Chao's subject is specified in terms of individual sentences isolated from larger units of discourse. As Lii (1975:21 and 57) points out, the semantic relationship of "aboutness" is difficult to define without considering discourse and Chao does not distinguish between different components in the analysis of a sentence, i.e. syntax, semantics, and discourse.

Nevertheless, Chao's description of the subject both in terms of its initial position in structure and its function of "aboutness" in discourse correctly reflects the relatively consistent correlation between word order and discourse in Mandarin Chinese, which has been the basis for

linguists to treat the language as a topic-prominent language.

2.2 Li and Thompson's Topic

Li and Thompson (1981) use a functional approach and describe Mandarin Chinese in terms of the function of the structure. Discourse factors such as the linguistic context play an important role in choosing different word orders. In this section, I will consider their notions of topic and subject in Section 2.2.1 and the linking function of topic in discourse in Section 2.2.2. Finally I will make some comments on their theories about topic in Section 2.2.3.

2.2.1 Topic and Subject

Li and Thompson (1981) distinguish between topic and subject. The topic is "what the sentence is about" and sets "a spatial, temporal, or individual framework within which the main predicate holds" (p. 85). The subject is what bears a "doing" or "being" relationship to the verb (p. 87). They also claim that a topic must have the following three properties: (a) it should be definite or generic; (b) it should be in initial position; and (c) it may be followed by a pause or pause particle (p. 87). See (2.9) below for an illustration.

- (2.9) Zhe ke shu yezi hen da.
this M tree leaf very big

"This tree, (its) leaves are very big."

In (2.9), the topic zhe ke shu "this tree" is definite, is in initial position, and may be followed by a pause or pause particle. The second noun phrase yezi "leaves" is the subject, bearing the "being" relationship to the verb da "big."

2.2.2 Topic in Discourse

The topic is a discourse concept to Li and Thompson. One of its functions is to connect a clause to the previous or the following discourse (pp. 100-101). The topic relates the current clause to the previous discourse by picking up the same topic, introducing a slightly different topic, or reintroducing a topic that has been dropped. The topic relates the current clause to the following clause by standing in contrast with the topic in the following clause (1981:101).

The connecting function of topic between clauses is in the form of topic chains. According to Li and Thompson (p. 659), a topic chain is a group of clauses that talk about the same referent which is overtly mentioned only in the first clause. The topic has priority over the subject in determining the reference of a zero pronoun in the following clauses (p. 102). Let us look at (2.10).

- (2.10) Na ke shu yezi da; (suoyi) wo bu xihuan ____.
 that M tree leaf big so I not like

"That tree, the leaves are big; (so) I don't like it."

In (2.10), the zero pronoun at the end of the second clause (indicated by) is coreferential with the topic na ke shu "that tree," rather than the subject yezi "leaves" in the first clause. What "I" do not like in the second clause is "that tree," not "leaves."

As they notice, while the second shei "who(ever)" in (2.11a) can be deleted, the same question word in (2.11b) cannot (p. 528).

- (2.11) a. Shei yao he jiu zhi yao fu
 who(ever) want drink wine only need pay

liang kuai qian.
two dollar money

"Whoever wants to drink has to pay only two dollars."

- b. Jingcha yao zhua shei jiu zhua
 police want arrest who(ever) then arrest

shei.
who(ever)

"The police will arrest whomever (they) want to arrest."

But they need to explain why shei "who(ever)" behaves so differently. It should be noticed that, in (2.11a), shei "who(ever)" is the main topic in both clauses, hence its obligatory absence in the second clause. In (2.11b), where the main topic jingcha "police" is already suppressed in the second clause, the pronoun shei "who(ever)," which only represents a lower topic, thus must appear in the second clause.

Li and Thompson (1981:661) also notice that the main topics in the individual clauses may change. The clauses are then connected through coreference between the zero pronoun in the following clause and a noun phrase in the preceding clause, which may not be the main topic there. Let us look at (2.12) (1981:661).

(2.12) A: Women dasuan zuo shenme ne?
we plan do what Q

"What (shall) we plan to do?"

B: —₁ xia che yihou, —₂ xian dao
descend vehicle after first go to

Dahua Fandian, yaoshi —₃ you fangzi, dangran
Dahua hotel if exist room of course

—₄ hen hao.
very good

"After (we) get off the train, first (we)'ll go to the Dahua Hotel. If (they) have rooms, of course, (that) would be good."

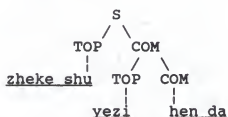
In (2.12), the first two zero pronouns refer to women "we" in the previous discourse. The third zero pronoun refers to Dahua Fandian "Dahua Hotel," which is not the main topic in the previous clause. The last zero pronoun refers to the whole idea that "the hotel has available rooms."

The dialogue in (2.12) shows that the referent of a topic chain may have been introduced in the previous clause, and that different topic chains can be connected to each other through the coreferential relationship between the noun phrases that they contain.

2.2.3 Comments on Li and Thompson

A problem with the distinction that Li and Thompson propose between topic and subject is that it is difficult to specify where an "about" relationship ends and where a "doing" or "being" relationship starts. It might be helpful to regard both noun phrases in (2.9) as topics, only at different levels, the first being a higher topic and the second a lower one, as shown in (2.13).

(2.13)



It would be more straightforward to say that a higher topic has priority over a lower topic in controlling a zero anaphor.

As they (p. 511) notice, the sentence in (2.14b), rather than (2.14c), would be an appropriate answer to the question in (2.14a).

- (2.14) a. Yuanzi li zenme zheme chao?
 yard in how so noisy

"How come it is so noisy in the yard?"

- b. (Zai) yuanzi li you yi zhi gou.
 at yard in exist a M dog

"In the yard (there) is a dog."

- c. You yi zhi gou zai yuanzi li.
 exist a M dog at yard in

"There's a dog in the yard."

Li and Thompson reason that (2.14b) is more appropriate³ because it has the same topic, the locative phrase yuanzi li "in the yard," as in the previous discourse (2.14a). They are right to say that the inappropriateness of (2.14c) comes from the fact that the locative is not coded as the topic. Whether (2.14c) codes yi zhi gou "a dog" as a potentially topical phrase or not is a separate issue.

Their suggestion that the topic occurs in initial position is valid only in their own framework, where no more than one layer of topic-comment structure is considered. If we accept the fact that a clause may have more than one layer of topic and comment, then this property will be partially falsified. Due to their one-level description of topic and comment, the second noun phrase in a double-subject construction or the noun phrase marked by a preceding ba or bei is not regarded as a secondary topic.

Finally, the notion of topic and comment can be used to describe some other structures. For instance, in the resultative sentences with de, the element(s) preceding the particle can also be regarded as a topic.

2.3 Tsao's Interclausal Study

Tsao (1987a, 1987b, 1987c, 1988, 1990) systematically uses the functional notion of topic and comment in his description of the sentence structures in Mandarin Chinese. He combines the formalist analysis and the functional

approach to the topic in his investigation of the interclausal relationship between individual clauses. Here I will briefly examine Tsao's notions of topic in Sections 2.3.1 and 2.3.2, and make some comments on his study in Section 2.3.3.

2.3.1 Tsao's Topic

Tsao's definition of topic is similar to Chao's (1968) subject and is much broader than Li and Thompson's (1981) topic. Moreover, he further distinguishes between sentence topics and clause topics (Tsao 1987a). The functions of the clause topics are the "chaining function" (i.e. binding clauses together), and the "contrast function" (i.e. contrasting two elements in parallel positions in different clauses) (1987c). In addition to a possible following pause or a pause particle, the adverb ye "also" can also be used to test if the preceding element is a topic (1987a).

Tsao applies the notion of topic and comment to the description of more types of sentence structures in Chinese. He in Tsao (1988) classifies simple sentences into single-topic sentences as in (2.15a), multiple-topic sentences as in (2.15b), and special-topic sentences as in (2.15c), according to the number and function of the topics.

- (2.15) a. Shan shang you yi ke shu. (p. 11)
 hill on exist one M tree

"There is a tree on the hill."

- b. Ta ba qian kan de hen zhong.
he BA money regard DE very weighty

"He takes money too seriously."

- c. Ta bi wo ligi da.
he than I strength big

"He has more strength than I do."

In (2.15a), there is only one topic, i.e. shan shang "on the hill." In (2.15b), there are two topics, the primary one being ta "he," and the secondary one being qian "money." The sentence in (2.15c) is a special-topic sentence because there are two primary topics, ta "he" and wo "I," conjoined by bi "than." The noun ligi "strength" in (2.15c) is the secondary topic. It is not clear why he considers the sentences with bei a simple-topic structure (1987a; 1988) while it is likely to treat it as a multiple-topic structure (cf. Chu 1979a). While he regards the verb phrase before de, which precedes a postverbal complement, as a kind of topic, he does not use the topic-comment approach to the structures with shi...de.

2.3.2 Topics at More Levels

There can be more than one level of topic and comment (Tsao 1988). For instance, the noun phrase after ba, the verb phrase before de, the second subject in a double-subject sentence or in a sentence with the object in initial position, and the preverbal object are all considered secondary topics (1988). The comparative word bi "than"

conjoins two parallel topics (2.15c). The particle lian "even" can mark either a primary or a lower topic, depending on the position of the noun phrase so marked (1987b; 1988).

The sentence in (2.16), for instance, has three levels of topic-comment structures (1987b).

- (2.16) Na ge xuexiao henduo jiaoshi lian zhe ge
that M school many teacher even this M

zi dou bu zhidao.
character even not know

"That school, many teachers do not even know
this character."

In (2.16), the first noun phrase na ge xuexiao "that school" is the primary topic, the second noun phrase henduo jiaoshi "many teachers" is the secondary topic, and the third noun phrase zhe ge zi "this character" is the tertiary topic introduced by lian.

Tsao points out that the primary topic and the lower topics in a ba-sentence as in (2.15b) behave differently. First, the lower topics are more limited in distribution. For instance, although both primary and secondary topics in a ba-sentences can be subject, direct object, locative, relational, possessor or class name, it is the primary topic, not the lower topics, that can also be indirect object or time phrase. Second, while the primary topic is always definite, the secondary topic marked by ba can sometimes be referential indefinite (1987a).

In Tsao's work, a realistic functional approach is combined with the precision of formalist description. He shows that the hierarchy of topic-comment structure actually affects various structural processes, i.e. deletion or movement, in individual clauses of a topic chain. The higher topic usually has priority over a lower topic or non-topic in controlling the "trace" of a deleted noun phrase in the comment part, as shown in (2.17).

- (2.17) a. Ta ba shujia bai man le shu, — jiu
he BA bookshelf put full LE book — then

haokan duo le.
good-look much LE

"He filled the bookshelf with books and (it)
looked much better."

- b. Ta ba shu bai man le shujia, — jiu
he BA books put full LE bookshelf — then

zhengqi duo le.
neat much LE

"He loaded the books onto the bookshelf and
(they) became much neater."

Tsao (1987a) points out that (2.17a) differs from (2.17b) in that they have different topics shared by the two individual clauses (1987a:23-24). In both (2.17a) and (2.17b), the primary topic in the first clause is ta "he." Also in both sentences, it is the secondary topic marked by ba that is coreferential with the zero pronoun in the second clause. The difference is that the controlling topic is shujia "bookshelf" in (2.17a), whereas the controlling topic is shu

"books" in (2.17b). It is clearly shown that a higher topic, e.g. a secondary topic marked by ba, tend to have higher priority than a non-topic, shu "book" in (2.17a) and shuila "bookshelf" in (2.17b), in controlling the coreference of a zero pronoun.

2.3.3 Comments on Tsao

One problem with Tsao's formalist approach is that he uses various transformational rules to derive certain sentences from some other sentences. For instance, he holds that the structure in (2.18c) is derived through transformation from (2.18b), which is in turn derived from (2.18a) (1987a:28-30).

- (2.18) a. Ta yi zhi tui die-duan le.
he one M leg fall-break LE

"He (topic), a leg (of his) broke (as he fell)."

- b. Ta die-duan le yi zhi tui.
he fall-break LE one M leg
(Same translation as for (2.18a))

- c. Ta ba yi zhi tui die-duan le.
he BA one M leg fall-break LE

"He had a leg of his broken (as he fell)."

The structure in (2.18a) is a double-subject sentence. To derive (2.18b) from (2.18a), the second subject yi zhi tui "a leg" is postponed from the position of a secondary topic to that of a non-topic. To derive (2.18c) from (2.18b), the

same noun phrase is preposed by the use of ba to the position of a secondary topic.

The positing of such transformations is not necessary for several reasons. First, (2.18a) and (2.18c) are very similar, the only difference being the use of ba. It is difficult to say that one is the source of the other, since the derivation may not necessarily be in one direction. Second, (2.18b) is not necessarily the intermediate step between (2.18a) and (2.18c), since the structures in (2.18a) and (2.18c) could be directly derived from each other, through ba-insertion or ba-deletion. Therefore, there is no need to posit any transformational rules to describe those sentences.

2.4 Sun and Givon's Text Analysis

Sun and Givon (1985) follow Givon's (1983) approach of text analysis in their description of word order variation in Mandarin Chinese. They found that the position of a noun phrase in a clause, e.g. preverbal or postverbal, is determined by its degree of topic accessibility in discourse. I understand their topic accessibility as similar to Givon's (1983) topic availability, which refers to the degree of easiness for the decoder of the text to retrieve the reference of a noun phrase from the previous text. Next we will briefly review Sun and Givon's (1985) findings about the relationship between the definiteness of a noun phrase and its position in a clause 2.4.1 and their correlation

between topic accessibility and the position of a noun phrase 2.4.2, and comment on their textual analysis 2.4.3.

2.4.1 Definiteness and Word Order

Sun and Givon (1985) base their description of word order, especially Verb-Object (VO) vs. Object-Verb (OV), of spoken and written texts from actual discourse. They find that the VO order accounts for 94% for written texts and 92% for spoken texts. The statistical figures are broken down in Table 2.1.

Table 2.1. Word Order and Definiteness
(Sun and Givon 1985:336).

CATEGORY	WORD ORDER				TOTAL	
	VO		OV		N	PCT
	N	PCT	N	PCT		
Written:						
ref. ind. N	276	99	3	1	279	100
ref. def. N	179	93	13	7	192	100
Spoken:						
ref. ind. N	109	99	1	1	110	100
ref. def. N	80	92	7	8	87	100

They use the statistics shown in Table 2.1 to refute Li and Thompson's (1974) two claims: (a) Modern Chinese is moving from an SVO language towards an SOV language; and (b) the OV order correlates with definiteness. Sun and Givon conclude that Chinese is not SOV, since the majority of the sentences are in the order of SVO, not SOV. Definiteness or indefiniteness is not consistently manifested by word order, since most of the NPs, either definite or indefinite, appear after the verb.

2.4.2 Topic Accessibility and Word Order

Sun and Givon measure the degree of topic accessibility in terms of referential distance and potential referential interference.

The referential distance of a noun phrase refers to the number of clauses between the current appearance of the noun phrase and the most recent occurrence of its referent in the previous text. The potential referential interference of a noun phrase refers to the presence (scored as 2) or absence (scored as 1) of one or more referents in the three preceding clauses that are compatible with the predicate verb and can compete for its reference. This can be illustrated by the paragraph in (2.19).

(2.19) a. Zhang San mai le yi ben shu,
Zhang San buy LE one M book

b. ____ ba ta song gei Li Si le.
BA it give to Li Si LE

c. Ta hen xihuan ____.
he very like

"Zhang San bought a book, and gave it to Li Si. He (Li Si) liked it very much."

The noun phrases Zhang San and shu "book" in (2.19a) both have a zero referential distance, since they are in the first clause of the text. The pronoun ta "it" in (2.19b) has a referential distance of one, since its most recent referent, shu "book," appears in the preceding clause (2.19a). The noun phrase Li Si in (2.19b) has a referential

distance of zero. The pronoun ta "he" in (2.19c) has a referential distance of one, since its most recent referent, Zhang San, appears in the preceding clause (2.19b). Now considering potential referential interference, the value for Zhang San in (2.19a) and Li Si in (2.19b) is zero. But the value for ta "he" in (2.20c) is one, there being another noun phrase Zhang San in the preceding two clauses, which competes with Li Si to be its antecedent.⁴

Sun and Givón's statistics for plain nouns, which are not modified by other elements, are shown in Table 2.2.

Table 2.2 Referential Distance and Potential Referential Interference (Sun and Givón 1985).

position	VO	OV
written		
referential distance	10.90	4.90
potential ref. interference	1.02	1.30
spoken		
referential distance	9.90	4.80
potential ref. interference	1.13	1.28

As shown in Table 2.2, the plain nouns in the preverbal position have a shorter referential distance, averaging about 4.9 clauses for written texts and 4.8 clauses for spoken texts. But they have a higher potential referential interference, averaging about 1.30 for written texts and 1.28 for spoken texts.

Based on their statistics, Sun and Givón claim that the OV order is related to emphasis/contrast rather than definiteness. They reason that, because OV correlates to

higher potential referential interference, it must be an emphatic or contrastive device to reduce ambiguity.

2.4.3 Comments on Sun and Givon

Sun and Givon (1985) first measure topic accessibility in actual Chinese texts with concrete statistics. Their application of the notions of referential distance and referential interference to Chinese is an objective approach to the discourse function of word order in the language. Their argument, however, is not quite to the point.

Their statistics show that Chinese cannot be regarded as SOV. But Li and Thompson (1974) do not state that Chinese is SOV already. They only claim that a historical change is going on.

Moreover, Li and Thompson's claim that the preverbal noun phrases tend to be definite is still valid. If we take a look at Sun and Givon's data as reproduced in Table 2.1, it is true that VO is the majority order for both written and spoken Mandarin Chinese texts. But if we look at Table 2.1 vertically, examining closely the different categories in terms of definiteness, we can see that, while most of the objects in the postverbal position are indefinite (276 indefinite vs. 179 definite for the written texts, 109 vs. 80 for spoken texts), the great majority of the objects in the preverbal position are definite (13 vs. 3 for written texts, and 7 vs. 1 for spoken texts). While accepting the fact that most objects, either definite or indefinite, can

appear in postverbal position, we should also note that most of the objects in the preverval position are definite. Therefore it is correct to say that the preverbal position tends to code definiteness.

Sun and Givon's data in Table 2.2 show that OV has a shorter referential distance, which does not invalidate but actually supports the claim that OV is more closely related to topic accessibility and therefore to definiteness. This does not exclude the possibility that OV may also code emphasis/contrast in addition to definiteness.

2.5 Summary

Chao brings out the topic-prominent nature of Mandarin Chinese by characterizing a subject functionally as a topic, and syntactically as an initial element. Chao's notion of subject is more comprehensive than that of Li and Thompson and Tsao. Both Chao and Tsao accept the multi-level topic-comment structures in Chinese. In describing topic-comment structures in Chinese, Tsao's is the most successful in formalizing their syntactic features.

Li and Thompson, Tsao, and Sun and Givon all discuss the notion of topic in the light of its connecting function in discourse. While Tsao's studies mainly deal with the connection between individual clauses within one sentence, Li and Thompson's studies in some cases go beyond the level of sentence, as shown in (2.12) and (2.14). Sun and Givon further consider the general relationship between word order

and textual cohesion, which is more explicitly brought out by their quantitative analysis of topic continuity.

Notes

¹The examples and English translations are taken from Chao (1968:83-87); I have changed the romanization into the pinyin forms and glossed the Chinese lexical items.

²There is still a controversy with regards to the postverbal phrases marked by de. The reader is referred to Huang (1988a) for a brief survey. Also see Section 6.5.3 for a topic-comment approach.

³As Professor Chauncey Chu (personal communication) points out, the appropriateness is a matter of degree, rather than an absolute dichotomy of being either appropriate or inappropriate.

⁴Li Si is interpreted as the antecedent of ta "he" only in the context. It is also possible for Zhang San to be coreferential with ta. In that case, ta still has a referential interference of one, with Li Si competing with Zhang San.

CHAPTER III

FORMAL DESCRIPTION OF WORD ORDER IN MANDARIN CHINESE

Even though semantics plays an important role in determining word order in Chinese, meaning is not the only factor affecting word order (cf. Wang 1987). There are formal patterns of clause structure in Chinese syntax. This chapter is a formal description of different word orders in Mandarin Chinese. Section 3.1 introduces phrases, clauses, and sentences in Chinese. Section 3.2 introduces the basic word order patterns of the simple sentence. Section 3.3 describes the structures with more than one verb phrases. Section 3.4 deals with the structures with more than one noun phrases before the verb. Section 3.5 examines the structures with more than one noun phrases after the verb. Section 3.6 treats the afterthought and raising clauses. Section 3.7 discusses the word order typology of Chinese. And finally, Section 3.8 is a summary of the chapter.

3.1 Phrases, Clauses, and Sentences

The lexical items of Mandarin Chinese are classified into nouns, verbs, prepositions, adverbs, pronouns, auxiliaries, particles, conjunctions, etc.¹ The noun phrase (NP) is a phrase headed by a noun or pronoun. The verb phrase (VP) is a phrase headed by a verb. The prepositional

phrase is a phrase headed by a preposition. The ba-phrase and bei-phrase are both prepositional phrases. Adverbs, auxiliaries, and particles are components in a verb phrase. Conjunctions are used to join two or more lexical items or phrases of the same category. Here is an example (3.1).

- (3.1) Naxie ren mashang yao cong xuexiao lai le.
 those person soon will from school come Le
 "Those people will soon come from the school."

In (3.1), naxie ren "those people" is a noun phrase, with ren "people" as its head or main element. The rest of the sentence, mashang yao cong xuexiao lai le "will soon come from the school" is a verb phrase, with the verb lai "come" as its head. Within the verb phrase, there is an adverb mashang "soon," an auxiliary yao "will," and a prepositional phrase cong xuexiao "from the school," which is composed of a preposition cong "from" and a noun phrase xuexiao "school." The final element in the verb phrase, le, is a particle with various syntactic and discourse functions. Here it indicates a change of state.²

The distinction between a VP and a clause, and between a clause and a sentence, is not clearly defined for Mandarin Chinese. For the purpose of discussion, a clause in this study is defined as a structure which contains one VP. A simple sentence has one clause, with or without another clause embedded as a noun phrase or adjectival phrase.³ A complex sentence has another clause embedded as its

adverbial phrase. A compound sentence has two or more clauses implicitly or explicitly conjoined together. They are illustrated in (3.2).

- (3.2) a. Naxie ren mashang yao cong xuexiao lai le
 those person soon will from school come LE
 "Those people will soon come from the school."
- b. Ta lai Meiguo tai hao le.
 he come America too good LE
 "It is very good for him to come to America."
- c. Ni lai de shihou, wo yijing zou le.
 you come MOD time I already leave LE
 "When you came, I had already left."
- d. Ta xian dao shudian hou dao tushuguan.
 he first go to bookstore then go to library
 "He first went to the bookstore, then went to the library."

The sentence in (3.2a) is a simple sentence, which contains only one verb phrase mashang yao cong xuexiao lai le "will soon come from the school." The sentence in (3.2b) is also a simple sentence, with an embedded clause ta lai Meiguo "he comes to America" as an NP. The sentence in (3.2c) is a complex sentence, with an embedded clause ni lai de shihou "when you came" as an adverbial. The sentence in (3.2d) is a compound sentence with two clauses on equal status.

3.2 Simple Structures

This section introduces the word order patterns of the simple structures, those with one VP and an optional NP in

front of it. Lii (1975:104) posits nine word order patterns for the unmarked simple sentences (where transformations have not applied to accommodate discourse functions) in Mandarin Chinese (3.3).⁴

(3.3) a. Subject - Verb:

Tamen zou le.
they leave LE

"They left."

b. Subject - Verb - Object:

Tamen mai le yi bu che
they buy LE one M car

"They bought a car."

c. Verb - Object:

Xia xue le.
fall snow LE

"It is snowing now."

d. Subject - Prepositional Phrase - Verb:

Ta zai shafa shang shuijiao
he at sofa on sleep

"He is sleeping on the sofa."

e. Subject - Verb - Prepositional Phrase:

Ta die dao he li le
he fall to river in LE

"He fell into the river."

f. Subject - Prepositional Phrase - Verb - Object:

Ta zai jia li kan xiaoshuo.
he at home in read novel

"He is reading a novel at home."

- g. Subject - Verb - Object - Prepositional Phrase:

Ta cun le yixie qian zai yinhang
he deposit LE some money at bank

"He deposited some money in the bank."

- h. Subject - Verb - Indirect Object - Direct Object:

Wo ji gei Li Taitai yi ben shu.⁵
I mail to Li Mrs. a M book

"I sent a book to Mrs. Lin."

- i. Subject - Prepositional Phrase - Verb - Indirect Object - Direct Object:

Wo yong hangkong de ji gei Lin Taitai yi
I use airmail MOD mail to Lin Mrs. one
ben shu.
M book

"I sent a book to Mrs. Lin by airmail."

Starting from Lii's patterns, we will further develop some more general patterns. The term "subject" is used in the examples in (3.3). According to Lyons (1977:504), the grammatical subject is characterized by three factors, i.e. agreement with the verb, nominative case marking, and initial position. The first two criteria do not apply to the grammatical subject in Mandarin Chinese, since the language does not mark any or the nominative case. The only criterion is word order. But as will be seen in Chapter IV and Chapter V, the initial NP may or may not be an argument of the verb. Thus the term "subject" is not as accurate a descriptive

term as NP for formal structure, agent for semantics, or topic for discourse.

If we use noun phrases (NP) and prepositional phrase (PP) together with verb (V) for the constituents in the sentences of (3.3), the nine patterns can be rewritten as (3.4a-i).

- (3.4) a. NP - V
 b. NP - V - NP
 c. V - NP⁶
 d. NP - PP - V
 e. NP - V - PP
 f. NP - PP - V - NP
 g. NP - V - NP - PP
 h. NP - V - NP - NP
 i. NP - PP - V - NP - NP

If we use S for a clause and use VP for the part after the first NP, then the patterns in (3.4) can be collapsed into the two basic ones in (3.5), where the parentheses are used to indicate optionality and the slash (/) is used to indicate alternation.

- (3.5) a. S -> (NP) - VP
 b. VP -> (PP) - V - (NP) - (NP/PP)

The rule in (3.5a) also accounts for the clauses with only the verb, as in (3.6), where the argument of the verb is suppressed.

- (3.6) Lai le
 come LE

"(He/She/It/They/We) came."

A PP can also appear in the clause-initial position and between the verb and the direct object, as shown in (3.7).

- (3.7) Cong jia li ta ji dao Niuyue yi feng xin
 from home in he mail to New York one M letter
gei wo.
 to me

"From home he sent a letter to me in New York."

Therefore (3.5a) and (3.5b) need to be extended to (3.8).

- (3.8) a. S → (PP) - (NP) - VP
 b. VP → (PP) - V - (PP) - (NP) - (PP/NP)

The pattern in (3.8a) says that a clause in Mandarin Chinese contains a verb phrase, an optional PP and/or NP before it. The pattern in (3.8b) says that a verb phrase is composed of a verb, with an optional PP preceding or following it, and with one or two following NPs.

3.3 Structures with Two or More VPs

A sentence may have more than one VP's in it. The NP in a sentence may contain a VP or a clause, as shown in (3.9a) and (3.9b), respectively.

- (3.9) a. Shuo huang bu hao.
 say lie not good
 "Telling lies is not good."
 b. Ta lai Meiguo tai hao le.
 he come America too good LE

"It is very good for him to come to America."

In (3.9a), shuo huang "tell lies" is a VP functioning as an NP in the sentence. In (3.9b), the clause ta lai Meiguo "he comes to America" is embedded in the higher clause as an NP. The structures in (3.9) require no further revision of the pattern in (3.8), except that the constituency of the NP needs to be specified so as to include a VP or another clause.

The VP surrounded by the copular shi "be" and the particle de can be regarded as a nominalized VP (3.10)⁷.

- (3.10) Ta shi zuotian lai de.
he be yesterday come DE

"It was yesterday that he came."

In form, the phrase zuotian lai de "came yesterday" in (3.10) is a nominalized VP, marked by the particle de. The structure in (3.10) is therefore a simple sentence, with shi "be" as its verb.

Serial verb structures⁸ (3.11a), verb-copying structures (3.11b), descriptive structures (3.11c), and the you-sentences (3.11d) also contain two VPs.⁹

- (3.11) a. Ta shang lou shuijiao.
he go upstairs sleep

"He's going upstairs to sleep."

- b. Ta qi ma qi le san tian.
he ride horse ride LE three day

"He rode a/the horse for three days."

- c. (Zuotian) lai le yi ge ren hui shuo
yesterday come LE one M person can speak

Zhongguohua.
Chinese

"(Yesterday) came a person who can speak Chinese."

- d. You yi ge xuesheng lai le.
there be one M student come LE

"A student has come."

In (3.11a), there are two VPs, shanglou "go upstairs," and shuijiao "sleep." In (3.11b), the verb qi "ride" is reduplicated in order to take another argument san tian "three days." In (3.11c), the second VP, hui shuo Zhongguohua further describes the NP yi ge ren "a person." The sentence in (3.11d) is similar to (3.11c), and has two VPs, you yi ge xuesheng "there is a student," and lai le "has come."

Next the sentences with a directional complement lai "come" or qu "go" (Lu 1984), after the verb, are shown in (3.12).

- (3.12) a. Ta pao shang shan qu.
he run on hill go

"He ran away up the hill."

- b. Ta na hui jia yi ben shu lai.
he take back home one M book come

"He brought a book back home."

In (3.12a), the first VP is pao shang shan "run up the hill," and the second VP is qu "go." In (3.12b), the first VP is na hui jia yi ben shu "carry home a book," and the

second VP is lai "come."¹⁰ This analysis would group the sentences in (3.12) together with the serial verb structures in (3.11a). Another possible analysis is to treat the directional complement lai or qu as a part of a discontinuous phrasal verb, pao qu "run away" in (3.12a), and na lai "bring" in (3.12b), which are separated by other phrases.

In order to account for the sentences with two or more verb phrases, the pattern in (3.13a) is added to (3.8), as shown in (3.13).

- (3.13) a. S → S (...S)
 b. S → (PP) - (NP) - VP
 c. VP → (PP) - V - (PP) - (NP) - (NP/PP)

The rule in (3.13a) allows a sentence to contain more than one clause. The rules in (3.13b) and (3.13c) are the same as (3.8a) and (3.8b) respectively.

3.4 Structures with Two or More Preverbal NPs

There might be two or more NPs appearing before the verb in a clause, as shown in (3.14).

- (3.14) a. Zhe ke shu yezi hen da.
 this M tree leaves very big
 "This tree has big leaves."
 b. Zhe zhong dongxi shei dou bu chi.
 this kind thing whoever all not eat
 "Nobody eats this kind of thing."

- c. Ta shu kan le.
he book read LE

"He has read the book."

The sentence in (3.14a) is the double-subject sentence. The sentence in (3.14b) has the object placed at the beginning. The sentence in (3.14c) places the object between the other NP and the verb.

Phrases indicating time, such as jintian "today," and phrases indicating place, such as zheli "here," can also be regarded as NPs, appearing either in the initial position or immediately in front of the verb. This is shown in (3.15). In (3.15a), the phrase for time jintian "today" precedes the noun phrase wo "I." In (3.15b), the phrase for location zheli "here" appears between the noun phrase tamen "they" and the verb you "have."

- (3.15) a. Jintian wo qu xuexiao.
today I go to school

"I go to school today."

- b. Tamen zheli you henduo pengyou.
they here have many friend

"They have many friends here."

The structures with a postverbal complement preceded by de (a modifier marker) can also be regarded as containing two NPs, as shown in (3.16).

- (3.16) Ta pao de kuai.
he run DE fast

"He runs fast."

"He can run fast."

In form, the constituency of (3.16) is NP-NP-VP, with pao de "run" as a nominalized VP marked by de. The verb kuai "fast" can be interpreted as a descriptive complement or a potential complement, as conveyed by the two English translations. The sentences with the descriptive complement and the potential complement can be treated as sentences with two NPs preceding the final verb, e.g. kuai "fast" in (3.16).

The patterns in (3.13b) needs to be revised to allow a clause to contain more than one NP before the verb (3.17).

(3.17) a. S → S (...S)

b. S → (PP) - (NP...NP) - VP

c. VP → (PP) - V - (PP) - (NP) - (NP/PP)

3.5 Structures with Two or More Postverbal NPs

Huang Shuanfan (1984:61) proposes a surface structure condition that prevents the appearance of two or more constituents after the verb except for the verbs that are subcategorized for two objects. For instance, (3.18a) is unacceptable because it violates the condition (Huang 1984:56).

(3.18) a. *Wo xi zao Xiao Ming.

I wash bath Xiao Ming

"I bathe Xiao Ming."

- b. Wo gei Xiao Ming xi zao.
 I for Xiao Ming wash bath

"I bathe Xiao Ming."

In (3.18a) the verb xi "bathe" has two NPs after it, zao "bath" and Xiao Ming, and the result is unacceptable. In (3.18b), ba is used to prepose the NP Xiao Ming to the preverbal position, reducing the number of phrases after the verb, and the resulting sentence is acceptable.

But many sentences with two NPs after the verb are acceptable, although the verbs are not subcategorized to take two objects. This is shown in (3.19), where the sentences have a NP after the verb to indicate duration or number of occurrences.

- (3.19) a. Wo kan le ta yi ge zhongtou.
 I see LE he one M hour

"I saw (i.e. visited) him/her for one hour."

- b. Ta kan le yi ge ren liang ci.
 he see LE one M person two time

"S/He saw a person twice."

- c. *Ta kan le ren liang ci.
 he see LE person two time

"S/He saw a person twice."

Li and Thompson (1981:445-446) suggest that the sentences with two postverbal NPs are acceptable if the direct object, i.e. the first NP, is definite, or is referential and animate. Hence in (3.19a), the first NP ta "he" after the verb kan "look" is definite. In (3.19b) the first NP yi ge

ren "a person" after the verb is both referential and animate.¹¹ In (3.19c) the first NP ren "people" after the verb is not referential and the sentence is unacceptable.

If we regard duration and frequency phrases as NPs, then the sentences containing them (3.19a-b) can also be accounted for by the rules in (3.17), which allow two noun phrases to appear after the verb.

3.6 Structures with Two or More PPs

The sentence in (3.20a) (=3.7) shows that there may be more than one PP after the verb. But such sentences are often less acceptable (3.20b).

- (3.20) a. Cong jia li ta ji dao Niuyue yi feng xin
 from home in he mail to New York one M letter
gei wo.
 to me

"From home he sent a letter to me in New York."

- b. ?Cong jia li ta ba yi feng xin ji dao
 from home in he BA a M letter mail to
dao Niuyue gei wo.
 New York to me

"From home he sent a letter to me in New York."

Those with three or more PPs are unacceptable (3.21).

- (3.21) *Cong jia li ta ba yi feng xin ji
 from home in he BA one M letter mail
guo Daxi Yang dao Niuyue gei wo.
 over Atlantic to New York to me

"From home he sent me a letter over the Atlantic to New York."

While the number of PPs is much restricted after the verb, the number of PPs is not so restricted before the verb, as shown in (3.22).

- (3.22) a. Ta cong jia li zuotian ji xin.
he from home in yesterday mail letter

"From home he sent a letter yesterday."

- b. Cong jia li jingguo Daxi Yang wang Niuyue
from home in past Atlantic to New York

ta ji xin.
he mail letter

"From home over the Atlantic to New York he sent a letter."

- c. Ta cong jia li jingguo Daxi Yang wang Niuyue
he from home li past Atlantic to New York

ji xin.
mail letter

"He sent a letter from home over the Atlantic to New York."

In (3.22a), there is one PP cong jia li "from home" before the verb. In (3.22b), there are three PPs at the beginning of the sentence, i.e. cong jia li "from home," jingguo Daxi Yang "over the Atlantic," and wang Niuyue "to New York." In (3.22c), there are three PPs between the first NP and the verb, i.e. cong jia li "from home," jingguo Daxi Yang "over the Atlantic," and wang Niuyue "to New York."

Therefore the rules for the word order patterns in clauses can be further generalized into (3.23).

- (3.23) a. S → S (...S)
 b. S → (PP...PP) - (NP...NP) - VP
 c. VP → (PP...PP) - V - (PP) - (NP) - (NP/PP)

The rule in (3.23a) allows a sentence to contain one or more clauses. The rule in (3.23b) allows a clause to have one or more PPs at the beginning of a clause, and one or more NPs in front of the VP. The rule in (3.23c) allows the VP to contain one or more PPs in front of the verb, or one or more NPs after the verb. Later in Chapters IV and V, we will see that various semantic and discourse factors would drastically limit the actual word orders for the clauses.

3.7 Afterthought and Raising Sentences

There are two more structures that pose difficulty. One is the structure of the afterthought sentences (Chao 1968:69). The other is the structure of the raising sentences.

First we will look at the afterthought sentence in (3.24). Following Packard's (1986) suggestion, we can treat the structure in (3.24) as having the pattern of VP-NP, with

- (3.24) Jin lai ba, ni!
 enter come INT you

"Come in, you!"

the VP appearing in front of the NP. This structure then can be accounted for by (3.23).

Next let us look at the raising sentence in (3.25a) and its related sentences in (3.25b) and (3.25c).

- (3.25) a. Gongzuo hen nan zhao.
job very hard find

"A job is hard to find."

- b. zhao gongzuo hen nan.
find job very hard

"Finding a job is hard."

- c. Hen nan zhao gongzuo.
very hard find job

"It is hard to find a job."

If we regard nan zhao "hard to find" in (3.25a) as a compound or phrasal verb, then the structure of the whole sentence is simply NP-VP. The sentence in (3.25b) has a nominalized VP, zhao gongzuo "find a job," in the initial position, and is also NP-VP. The structure in (3.25c) has the order of VP-NP, with the verb phrase hen nan "very hard," followed by the nominalized verb phrase zhao gongzuo "find a job," and it is similar in form to the afterthought sentence in (3.24). Both the afterthought sentences and raising sentences are then covered by the patterns in (3.23).

3.8 Word Order Typology of Mandarin Chinese

As Chu (1984b) and Sun and Givon (1985) show, the great majority of the clauses in Mandarin Chinese are in the order

of SVO. That is, in most cases, the verb is located between two NPs, one being the "subject," and the other "object."¹²

The examples in (3.25) show that Chinese has both SVO and SOV order, as in (3.26a) and (3.26b) respectively.

- (3.26) a. Tamen mai le yi bu che.
they buy LE one M car

"They bought a car."

- b. Ta shu kan le.
he book read LE

"He has read the book."

According to Li and Thompson (1981), Chinese has both prepositions and postpositions, as shown in (3.27).

- (3.27) Ta zai jia li kan xiaoshuo.
he at home in read novel

"He is reading a novel at home."

The lexical item zai "at" is considered a preposition, while the lexical item li "in" is regarded as a postposition. But if we treat the elements like li "in" as nominal suffixes attached to the noun (Chu 1984a), then such phrases as zai jia li "at home" can be regarded as a prepositional phrase, with the preposition zai "at" followed by the noun phrase jia li "inside of home."

Chinese also shows both SV and VS orders as in (3.28).

- (3.28) a. Tamen zou le.
they leave LE

"They left."

- b. Xia xue le.
fall snow LE

"It is snowing now."

In (3.28a) the subject noun phrase precedes the verb. In (3.28b) the subject NP follows the verb.

A PP in Chinese may precede or follow the verb, as shown in (3.29a) and (3.29b).

- (3.29) a. Ta zai shafa shang shuijiao
he at sofa on sleep

"He is sleeping on the sofa."

- b. Ta die dao he li le.
he fall to river in LE

"He fell into the river."

With regard to the relative order of the noun (N) and its genitive (G), adjective (A), or any other modifiers (Mod), within an NP, the Chinese order is regularly GN, AN and Mod-N, with the genitive, adjective, and other kinds of modifier preceding the noun, as illustrated in (3.30). This head-final order is characteristic of SOV languages.

- (3.30) a. Wo de shu bu gui.
I POSS book not expensive

"My books are not expensive."

- b. Ta kanjian henduo ren.
he see many person

"He saw many people."

- c. Ta mai de shu bu gui.
he buy DE book not expensive

"The book(s) that he bought was/were not expensive."

In (3.30a) the genitive wo de "my" precedes the noun shu "book." In (3.30b) the adjective henduo "many" precedes the noun ren "person." And in (3.30c) the relative clause precedes the noun shu "book."

Based on Greenberg's (1966) study, Hawkins (1980:209) suggests that languages conform to a set of co-occurrence possibilities defined by some implicational universals. The word order features of NPost (noun before postposition), OV (object before verb), GN (genitive before noun), and AN (adjective before noun) tend to occur together, i.e. head-final. On the other hand, the word order features of PrepN (preposition before noun), VSO (verb-subject-object), NG (noun-genitive) and NA (noun-adjective) tend to occur together, i.e. head-first. These two sets of correlations characterize the two large classes of languages, i.e. SOV and VSO, respectively, as shown in Table 3.1.

Table 3.1. Word Order Correspondences
from Hawkins (1983:32)

<u>Co-occur Order</u>	<u>N of langs</u>	<u>Co-occur Order</u>	<u>N of langs</u>
Post & OV & GN	151	Prep & VO & NG	124
Post & VO & GN	26	Prep & OV & NG	10
Post & VO & NG	2	Prep & OV & GN	2

The SOV group is shown in the first row in the left column in Table 3.1, which has 151 languages. The VSO group is shown in the first row in the right column in Table 3.1,

which has 124 languages. According to Hawkins (1980), the SVO languages are only a mixed type with word order features from both SOV and VSO languages and thus do not form a consistent group.

Chinese has been classified as one of the languages with the features of SVO, GN, and NPost (Greenberg 1966).¹³ If that classification is accepted, Chinese then belongs to the second row in the right column of Table 3.1 (with 26 languages). If we accept prepositions instead of postpositions in Chinese, the word order co-occurrence of the language is still in a minority group, not even listed in Table 3.1.

Since Mandarin Chinese has the SVO order as its unmarked order (Lii 1975:43), it can be classified as an SVO language, a mixed type of language according to Hawkins (1980).¹⁴

3.9 Summary

This chapter has examined various word order patterns in Mandarin Chinese clauses and generalized the patterns into three basic rules (3.23), without considering the semantic roles and the discourse functions of the constituents. The patterns are for the theoretically possible clauses in the language, that is, system-sentences in Lyons' (1977) terminology. As noticed by Chu (1984a), word order is affected by other factors, such as the proximity of the resultative complement to the verb, and the

definiteness of the noun phrases in discourse. Lii (1975:43), for instance, chooses SVO (or SV, or VO) order as the grammatically unmarked order for Chinese, and accounts for the occurrence of the other patterns by using the discourse factors of theme, rheme, and focus.

This study is different from Lii (1975) in that system-sentences are not necessarily "unmarked." Here all the possible clauses are considered system-sentences in the language. The text-sentences, then, are the structures that are actually used. The following chapters will discuss how semantic and discourse factors influence the choice of different system-sentences as actual text-sentences in a particular context.

Notes

¹The definition of the term "word" and the classification of the categories in Chinese have been controversial. Since this study cannot get involved in the argument, the reader is referred to Hsueh (1983) and Chan and Tai (1989) for a discussion of the issue.

²See Chang (1986) for the discussion of the particle le.

³Okurowski (1987:77) defines a clause as having one verb phrase that is not embedded as an NP in another clause. According to her, the structure in (3.2a) would be treated as composed of one clause. The sequences with two verb phrases in (3.2b-d) would be treated as two clauses. Both Li and Thompson (1981) and Chu (1984) only regard the sentences with one clause as simple sentences. But Hu et al. (1981) and Huang and Liao (1985) treat the sentences with embedded nominal clauses or relative clauses as simple sentences. This study follows Hu et al. (1981) and Huang and Liao (1985) in defining simple sentences.

⁴Professor Chauncey Chu (personal communication) points out that some of the sentences in (3.3), for instance,

(3.3e), (3.3g), and (3.3i) are not quite acceptable in "general" Mandarin, or Putonghua, but are fully acceptable in the variety used in Taiwan.

⁵Here the combination jigei is regarded as one verb, rather than as a verb followed by a preposition. See Li (1988) for a possible explanation.

⁶See Huang (1988b), Li (1988), and Li and Thompson (1981:517ff) for the discussion of the verbs that can appear in initial position and take a following NP.

⁷While Huang (1988a) treats the phrase before de as a verb phrase, Li and Thompson (1981) call the shi...de construction a nominalized structure.

⁸There are different definitions of "serial verb" structures. See Li and Thompson (1981:594ff) and Chu (1984a:270ff).

⁹The existential sentences with an initial location phrase (an NP or PP) belong to the pattern of NP/PP-V-NP, as in (3n). When they have a descriptive phrase, they are the structures with two VPs.

(3n) (Zai) shan shang zhang zhe yi ke shu hen da.
at hill on grow DUR one M tree very big

"There grows a tree on the hill, and it is big."

¹⁰The final verb lai and qu in such sentences as (3.12) are often unstressed in spoken Chinese, which is an argument for treating them as particles, rather than full verbs.

¹¹The noun phrase with the number-measure modifier, i.e. yi ge ren "one person" in (3.19b), can also mean "each person," while the same noun phrase in other contexts may be referential or non-referential.

¹²The terms "subject" and "object" are used here only to follow the discussions of Greenberg (1966) and Hawkins (1981 and 1983).

¹³Greenberg (1966) overlooks the prepositions in Mandarin Chinese.

¹⁴Li and Thompson (1981) are correct to regard Chinese as a language with mixed features of word order, but they are too quick to deny the language as an SVO type.

CHAPTER IV

SEMANTIC CONSTRAINTS ON WORD ORDER

Semantic and discourse factors can influence the ordering of elements in a clause. Lu (1984) finds that word order in Mandarin Chinese reflects five semantic and discourse distinctions: (a) agent and patient, (b) time sequence, (c) reference, (d) definiteness, and (e) topicalization. Tai (1985:32-3) suggests that two principles influence word order in Mandarin Chinese: the temporal sequence principle and the modifier before modified principle. Tai (1989) later proposes that the principle of topic before comment can be regarded as the subjective conceptualization of the temporal sequence principle.

In this chapter, three semantic relations will be examined: case roles in Section 4.1, scope relation in Section 4.2, and temporal sequence in Section 4.3. It will be shown that the reference distinction in Lu (1984) can be predicted by the scope. The effect of definiteness on word order will be discussed in Chapter V. The topic-comment structures will be discussed in Chapter VI.

4.1 Case Roles and Word Order

This section describes how NPs or PPs with different case roles are positioned relative to each other in

individual clauses. Based on the theories proposed in Fillmore (1968) and Chafe (1970), it is assumed that the NPs and PPs in a sentence contract certain semantic relations to the verb. These relations determine the case roles of the NPs and PPs. First we will briefly introduce some major semantic case roles for Mandarin Chinese.

4.1.1 Case Roles in Mandarin Chinese

Noun phrases and prepositional phrases acquire different case roles from their semantic relations to the verb (Fillmore 1968; Chafe 1970). Some of the case roles are agent, patient, locative, temporal, instrument, and beneficiary. Agent refers to the instigator of the action or event. Patient is the entity receiving the action or existing in a state or process. Locative is the position, origin, path, or destination in space. Time refers to the time in which the action or state exists. Instrument is the means by which an action is done. Beneficiary refers to the entity that receives or loses an object and can also be classified as goal or source in locative. The case roles in Mandarin Chinese are illustrated in (4.1).

- (4.1) a. Zhang San zai zheli gei wo mai le
 at here for I buy LE

wu ben shu.
five M book

"Zhang San bought five books for me here."

- b. Zhang San you wu ben shu.
 have five M book

"Zhang San has five books."

- c. Ta meitian yong maobi xie zi.
he every day use brush write character

"He uses the brush to write characters every day."

In (4.1a), the NP Zhang San is agent, the PP zai zheli "here" is locative, the NP wo "I" is beneficiary, and the NP wu ben shu "five books" is patient. In (4.1b), the NP Zhang San is locative, and the NP wu ben shu "five books" is patient. In (4.1c), the NP ta "he/she" is agent, the NP meitian "every day" is time, the PP yong maobi "with brush" is instrument, and the NP zi "character" is patient.

4.1.2 One Preverbal NP or PP

In the sentences with only one NP in the initial position, that NP can be agent, patient, locative, or time (4.2).¹

- (4.2) a. Ta mai le shu.
he buy LE book

"He bought books."

- b. Shu mai le.
he buy LE

"The book(s) were bought."

- c. Ouzhou hen jin.
Europe very near

"Europe is very near."

- d. Jintian leng.
today cold

"It is cold today."

In (4.2a), the initial NP ta "he" is agent. In (4.2b), the initial NP shu "book" is patient. In (4.2c), the initial NP Quzhou "Europe" is locative. And in (4.2d), the initial NP jintian "today" is temporal.

When there is one NP or PP on each side of the verb, the case roles of these two phrases can affect their relative order. As has been pointed out for languages in general, an agent noun phrase is more likely to be placed in the initial position than other case roles (Lyons 1977:503; Van Oosten 1984). In Mandarin Chinese, the order of agent-verb-patient or instrument-verb-patient is more likely, while the order of patient-verb-agent or patient-verb-instrument is not allowed, as shown in (4.3).

- (4.3) a. Ta kai le men.
he open LE door

"He opened the door."

- b. *Men kai le ta.
door open LE he

- c. Yong yaoshi kai le men.
with key open LE door

"With the key (one) opened the door."

- d. *Men kai le (yong) yaoshi.
door open LE with key

In (4.3a), the agent ta "he" has priority over the patient shu "book" to be coded in the initial position. In (4.3b), it is very unlikely to interpret ta "he" as the agent and men "door" as the patient, while the interpretation of ta

"he" as the patient and men "door" as the agent sounds distorted, if possible at all. In (4.3c), the instrument yaoshi "key" appears before the verb. The order of patient-verb-instrument in (4.3d), however, is not acceptable, unless yong yaoshi "with a/the key" is added as afterthought. This again shows that agent and instrument cannot appear in the postverbal position, as Chu (1984a:126) claims.

The locative phrases for goal, and the temporal phrases for duration or number of occurrences are coded after the verb (4.4a-b). Other types of locative and time phrases are placed before the verb (4.4c-d).

- (4.4) a. Shu ji dao jia le.
book mail to home LE

"The books were mailed home."

- b. Laoshi zou le san tian/san ci.
teacher walk LE three day three time

"The professor walked for three days/three times."

- c. (Zai) Ouzhou you henduo shan.
at Europe there be many mountains

"There are many mountains in Europe."

- d. (Zai) gunian lai le henduo ren.
in last year come LE many people

"Many people came last year."

In (4.4a), the patient shu "book" precedes the verb while the locative phrase dao jia "to home," which indicates goal, is placed after the verb. In (4.4b), the agent laoshi

"teacher" precedes the verb while the temporal phrases for duration, san tian "three days," and number of occurrences, san ci "three times," must follow the verb. In (4.4c), the locative phrase (zai) Ouzhou "(in) Europe" appears in the initial position. In (4.4d), the temporal phrase (zai) gunian "last year" appears in the initial position.

4.1.3 Two or More Preverbal NPs or PPs

When there are two NPs or PPs, or one NP and one PP, the relative order is more flexible, as shown in (4.5).

- (4.5) a. Ta yong yaoshi kai le men.
he with key open LE door

"He opened the door with a/the key."
"He used a/the key to open a/the door."

- b. Yong yaoshi ta kai le men.
with key he open LE door

"With the key, he opened the door."

- c. Ta (ba) men kai le.²
he BA door open LE

"He opened the door."

- d. Men (bei) ta kai le.
door BEI he open LE

"The door was opened by him."

- e. Yong yaoshi ba men kai le.
with key BA door open LE

"The key opened the door."

- f. Men yong yaoshi kai le.
door with key open LE

"The door was opened by a/the key."

In (4.5a), the agent NP ta "he" precedes the instrument yaoshi "key" marked by yong "with." In (4.5b), the agent ta "he" follows the instrument yaoshi "key." In (4.5c), the agent ta "he" precedes the patient men "door," which can be marked by ba. In (4.5d), the agent ta, which can be marked by bei "by," follows the patient. In (4.5e), the instrument yaoshi "key" marked by yong "with" precedes the patient. And in (4.5f), the instrument follows the patient. As the examples in (4.5) show, the relative order is not so restricted when there are only two case roles.

The use or non-use of the prepositions (or case markers) and the relative position of the phrases, however, are related to their case roles. When appearing at the beginning of the sentence, agents (4.5a, 4.5c) and patients (4.5d, 4.5f) tend not to have any markers. When appearing between another phrase and the verb, the markers for agent bei (4.5d) and patient ba (4.5c) are optional. When the patient appears after the verb, no marker is used (4.5a-b). The instrument marker yong "with" is obligatory.

Here are some examples with three NPs or PPs in the preverbal position (4.6).

- (4.6) a. Ta yong yaoshi ba men kai le.
 he with key BA door open LE
 "He opened the door with a/the key."
- b. Ta (ba) men yong yaoshi kai le.
 he BA door with key open LE
 "He opened the door with a/the key."

- c. Men (bei) ta yong yaoshi kai le.
 door BEI he with key open LE

"The door, he opened it with a/the key."

- d. Yong yaoshi ta ba men kai le.
 with key he BA door open LE

"With a/the key, he opened the door."

- e.*Yong yaoshi (ba) men (bei) ta kai le.
 with key BA door BEI he open LE

- f.*Men yong yaoshi (bei) ta kai le.
 door with key BEI he open LE

The order in (4.6a) is agent-instrument-patient. The order in (4.6b) is agent-patient-instrument. The order in (4.6c) is patient-agent-instrument. The order in (4.6d) is instrument-agent-patient. The sentences in (4.6e-f) are not acceptable because the agent ta "he" is placed after both the instrument yong yaoshi "with the key" and the patient (ba) men "door." This seems to be the only constraint on the order of case roles before the verb.

The agent marker bei tends not to be used if the agent appears earlier than the patient, as shown in (4.6a), (4.6b), and (4.6d). It is optional when the agent appears after the patient, as shown in (4.6c). The patient marker ba is obligatory if the patient phrase appears later than the instrument, as shown in (4.6a) and (4.6d). Otherwise, it is optional. The instrument marker yong is always obligatory.

For the locative phrases that are not goal and for the temporal phrases that are not duration or number of occurrences, the regular position is still before the verb,

either preceding or following the other case roles, as shown in (4.7).

- (4.7) a. Men jintian kai le.
door today open LE

"The door opened today."

- b. Jintian men kai le.
today door open LE

"Today the door opened."

- c. Ta (zai) Meiguo mai le yi suo fangzi.
he at America buy LE one M house

"He bought a house in America."

- d. (Zai) Meiguo ta mai le yi suo fangzi.
at America he buy LE one M house

"In America he bought a house."

The time phrase jintian "today" follows the patient men "door" in (4.7a), and precedes it in (4.7b). The locative (zai) Meiguo "in America" follows the agent ta "he" in (4.7c), and precedes it in (4.7d).

When there are more than two phrases before the verb, the position of the locative and temporal phrases is also flexible.

- (4.8) a. Jintian/cong shudian ta ba shu mai le.
today from bookstore he BA book buy LE

"Today/from the bookstore he bought the book(s)."

- b. Jintian/cong shudian shu (bei) ta mai le.
today from bookstore book by he buy LE

"Today/from the bookstore he bought the book(s)."

- c. Ta jintian/cong shudian ba shu mai le.
he today from bookstore BA book buy LE

"He bought the book(s) today/from the bookstore."

- d. Shu jintian/cong shudian (bei) ta mai le.
book today from bookstore by he buy LE

"The book(s), he bought it/them today/from the bookstore."

- e. Ta (ba) shu jintian/cong shudian mai le.
he BA book today from bookstore buy LE

"He bought the book(s) today/from the bookstore."

- f. Shu (bei) ta jintian/cong shudian mai le.
book BEI he today from bookstore buy LE

"The book(s), he bought it/them today/from the bookstore."

All the sentences in (4.8) are acceptable. They show that the locative or temporal phrase can precede both agent and patient (4.8a-b), separate them (4.8c-d), or follow them (4.8e-f). That is, the presence of a locative or temporal phrase does not affect the acceptability of the sentences, and is therefore different from the presence of an instrument phrase.

When both locative and temporal phrases are present in a sentence, the preferred order is temporal preceding locative (Tang 1988). The two phrases can also be separated by other elements. This is shown in (4.9).

- (4.9) a. Ta jintian (ba) shu cong shudian mai le.
he today BA book from bookstore buy LE

"He today bought the book(s) from the bookstore."

- b. Jintian ta cong shudian ba shu mai le.
today he from bookstore BA book buy LE

"Today he bought the book(s) from the bookstore."

- c. Shu jintian (bei) ta cong shudian mai le.
book today by he from bookstore buy LE

"The book(s), today he bought it/them from the bookstore."

- d. Jintian shu (bei) ta cong shudian mai le.
today book by he from bookstore buy LE

"Today the book(s) was/were bought by him from the bookstore."

The sentences discussed so far in this section all have preverbal elements with different case roles. But two or more phrases before the verb may also carry the same case role. If they are adjacent, they can be conjoined by a conjunction or, in spoken Chinese, by a pause. If they are not conjoined, the order must be such that the phrase with a larger scope precedes the one with a smaller scope, no matter whether they are adjacent or not, as in (4.10).³

- (4.10) a. Wo he ta mai le shu.
I and he buy LE book

"I and he bought a/the book."

- b. (Zai) Foluolida (zai) Shizi Xiaoxi wo you
at Florida at Cross Creek I have
fangzi.
house

"In Florida, I have a house at Cross Creek."

- c. Jintian ta shi dianzhong shang ke.
today he ten o'clock go to class

"Today he goes to class at ten."

In (4.10a), the two agents, wo "I" and ta "he," are conjoined by he "and," and can be regarded as one agent to the verb. In (4.10b), the locative Foluolida "Florida" which has greater scope precedes the locative Shizi Xiaoxi "Cross Creek" which has less scope. In (4.10c), the two time phrases, separated by the agent ta "he," are also in the order of greater scope before less scope.

4.1.4 Two or More Postverbal NPs or PPs

When two phrases appear after the verb, they can be a goal and a patient. Their relative order can be goal-patient (4.11a-b) or patient-goal (4.11c).

- (4.11) a. Ta gei wo liang ben shu.
he give me two M book

"He gave me two books."

- b. Ta ji dao Niuyue yi feng xin.
he mail to New York one M letter

"He sent a letter to New York."

- c. Ta ji yi feng xin dao Niuyue.
he mail one M letter to New York

"He sent a letter to New York."

The two postverbal phrases may also be a patient with a duration or occurrence phrase, as illustrated in (4.12).

- (4.12) a. Wo kan le ta yi ge zhongtou. (=3.19a)
I see LE he one M hour
"I saw (i.e. visited) him/her for one hour."

- b. Ta kan le yi ge ren liang ci. (=3.19b)
 he see LE one M person two time
 "S/He saw a person twice."
- c. Ta kan le yi ge zhongtou/liang ci ren.
 he see LE one M hour two time person
 "He saw people for one hour/twice."
- d. *Ta kan le yi ge zhongtou/liang ci
 he see LE one M hour two time
yi/na ge ren.
 one/that M person

In (4.12a), the patient ta "he" precedes the duration phrase yi ge zhongtou "one hour." In (4.12b), the patient yi ge ren "a person" precedes the occurrence phrase liang ci "twice." In (4.12c), the patient ren "person" follows the duration yi ge zhongtou "one hour" or occurrence liang ci "twice." But in that order, the patient cannot be referential, as attested by the unacceptable order in (4.12d).⁴

When there is one NP and a PP after the verb, the NP is usually patient and the PP is goal. Their relative order can be either goal-patient (4.13a) or patient-goal (4.13b).

- (4.13) a. Ta cun zai yinhang yixie qian li.
 he deposit at bank some money in
 "He deposited some money at the bank."
- b. Ta cun (le) yixie qian zai yinhang li.
 he deposit (LE) some money at bank in
 "He deposited some money in the bank."

In (4.13a), the goal zai yinhang li "at the bank" precedes the patient NP yixie qian "some money." In (4.13b), the goal

zai yinhang "in the bank" follows the patient yixie qian "some money."

The only PPs which appear after the verb are those for goal. It is not usual that a clause has two or more PPs after the verb, as shown in (4.14).

(4.14) a. ?Cong jia li ta ba yi feng xin ji
from home in he BA a M letter mail

dao Niuyue gei wo.
to New York to me

"From home he sent a letter to me in New York."

b. ?Cong jia li ta ji dao Niuyue yi feng xin
from home in he mail to New York one M letter

gei wo.
to me

"From home he sent a letter to me in New York."

The presence of different case roles in a clause imposes various restrictions on the relative order of NPs and PPs, thus greatly reducing the number of word order patterns that actually occur in language use. Next we will consider the effects of scope on the relative position of the NPs and PPs.

4.2 Scope and Word Order

The term "scope" here refers to the size of the referent or the set of referents of a linguistic element. The larger the referent or the set of referents of an element, physically or conceptually, the larger its scope.

The general principle in Mandarin Chinese is that the preceding element has a larger scope than a following element and semantically contains it. More specifically, the two elements may have a class-member or whole-part relationship. This containment relationship is perceived between preverbal phrases, either next to each other or separated by other elements. The relationship also holds between elements separated by the verb.

4.2.1 Preverbal NPs or PPs

Two or more consecutive elements sharing the same case role are ordered according to their relative scope, as shown in (4.15).⁵

- (4.15) a. (Zai) Foluolida (zai) Tanpa wo you fangzi.
at Florida at Tampa I have house

"In Florida, in Tampa I have a house."

- b. *(Zai) Shizi Xiaoxi (zai) Tanpa wo you fangzi.
at Cross Creek at Tampa I have house

"At Cross Creek, in Tampa I have a house."

- c. *(Zai) Tanpa (zai) Foluolida wo you fangzi.
at Tampa at Florida I have house

"In Tampa, in Florida I have a house."

In (4.15a), the first locative Foluolida "Florida" semantically contains the second locative Tanpa "Tampa," i.e., Tampa is in Florida, and their order is acceptable. In (4.15b), neither location, Cross Creek or Tampa, contains the other. The sentence in (4.15b) is not acceptable unless

the two locatives are marked as conjoined either by an conjunction he "and" between them, and/or by an adverb dou "both, all" before the main verb to mean "both at Cross Creek and in Tampa I have houses." In (4.15c), the first NP Tanpa "Tampa" has a smaller scope than the other location Foluolida "Florida," and the sentence is unacceptable.

Adjacent NPs or PPs in front of the verb may also be temporal (4.16a-b), agent (4.16c-d) or patient (4.16e-f).

- (4.16) a. Jintian si dianzhong you yu.
today four o'clock there be rain

"Today, it will rain at four."

- b. ?Si dianzhong jintian you yu.
four o'clock today there be rain

"At four o'clock it will rain today."

- c. Shi ge xuesheng wu ge mai shu qu le.
ten M student five M buy book go LE

"(Of) ten students five have gone to buy books."

- d. *Wu ge xuesheng shi ge mai shu qu le.
five M student ten M buy book go LE

- e. Daxiang bizi hen chang.
elephant nose very long

"Elephants, (their) trunks are very long."

- f. *Bizi daxiang hen chang.
nose elephant very long

In (4.16a), the first time phrase jintian "today" has greater scope than the second time phrase si dianzhong "four o'clock," and the sentence is good. In (4.16b), however, the NP with a smaller scope, si dianzhong "four o'clock,"

precedes the one with a larger scope, jintian "today," and the resulting sentence is not likely to be acceptable.⁶ For the same reason, since the first noun phrase, shi ge xuesheng "ten students," is more comprehensive than wu ge xuesheng "five students," the sentence in (4.16c) is good, but the one in (4.16d) is not. In (4.16e), the NP daxiang "elephant" semantically contains the NP bizi "nose" in a later position. The sentence in (4.16f), with bizi "nose" appearing earlier than daxiang "elephants," is not acceptable.

It should be added that only the second NP in (4.16) can be said to have a case role relating to the verb. This is shown most sharply in (4.16c) and (4.16e). In (4.16c), it was the "five students," not the "ten students" who went to buy books. And in (4.16e), what are long are the trunks of the elephants, not the elephants. The first NP is only semantically related to the second NP, and is related to the rest of the sentence as its topic (cf. Chapter V and Chapter VI).

The elements separated by other elements must also obey the scope restriction, as shown in (4.17). In (4.17a), the temporal phrase jintian "today" semantically contains the second time phrase shi dianzhong "ten o'clock" and the sentence is acceptable. In (4.17b), the first time phrase jintian "today" has the same scope as the second one, mingtian "tomorrow," and the sentence is not acceptable.

- (4.17) a. Jintian ta shi dianzhong shang ke.
today he ten o'clock go to class

"Today he goes to class at ten."

- b. *Jintian ta mingtian shang ke.
today he tomorrow go to class

"Today he goes to class tomorrow."

- c. *Shi dianzhong ta Jintian shang ke.
ten o'clock he today go to class

"At ten he goes to class today."

The order in (4.17c) is not acceptable with shi dianzhong "ten o'clock" of a smaller scope occurring before jintian "today" of a larger scope.

4.2.2 NPs or PPs Separated by Verb

The scope restriction of large before small also holds between two NPs or PPs across the verb. Let us look at the examples in (4.18).⁷

- (4.18) a. Shi ge xuesheng zou le wu ge.
ten M student go LE five M

"Of ten students, five have left."

- b. *Wu ge xuesheng zou le shi ge.
five M student go LE ten M

- c. Che na ge ren kai zou le
car that M person drive away LE

Zhang San de (che).
POSS car

"As to cars, that person drove away the one belonging to Zhang San."

d. *Zhang San de che na ge ren kai zou
 POSS car that M person drive away

le che.
 LE car

In (4.18a) the first NP shi ge xuesheng "ten students" has a larger scope than the NP after the verb wu ge "five (students)" and the sentence is good. In (4.18b), however, the preverbal NP wu ge xuesheng "five students" has a smaller scope than the one after the verb, and the sentence is thus unacceptable. The sentence in (4.18c) is acceptable because the first NP che "cars" has a larger scope than the other NP Zhang San de (che) "Zhang San's (car)." The sentence in (4.18d) is not acceptable, because the first NP Zhang San de che "Zhang San's car" has a smaller scope than the other NP che "car."

4.2.3 Ba-Sentences and Bei-Sentences

In the ba-sentences, the NP of greater scope should also precede the one of smaller scope. This is true whether both precede the verb (4.19a-b) or they are separated by the verb (4.19c-d). In (4.19a), the NP juzi "orange" semantically contains the NP pi "skin" and the order is acceptable. But in (4.19b), the order is the opposite, with pi "skin" placed before juzi "orange," and the scope restriction is violated. In (4.19c), juzi "orange" appears earlier than pi "skin" and the sentence is acceptable. The sentence in (4.19d) is unacceptable because pi appears

earlier than juzi, therefore the sentence violates the scope restriction.

- (4.19) a. Juzi wo ba pi bo le.
orange I BA skin peel LE

"As to the orange(s), I peeled them."

- b. *Pi wo ba juzi bo le.
skin I BA orange peel LE

- c. Wo (ba) juzi bo le pi.
I BA orange peel LE skin

"I peeled the orange."

- d. *Wo (ba) pi bo le juzi.
I BA skin peel LE orange

The bei-sentences also obey the scope restriction. Let us examine the examples in (4.20).

- (4.20) a. Juzi pi (bei) wo bo le.
orange skin BEI I peel LE

"The orange(s), its/their skin I peeled."

- b. *Pi juzi (bei) wo bo le.
skin orange by I peel LE

- c. Juzi (bei) wo bo le pi.
orange by I peel LE skin

"The orange(s), I peeled its/their skin."

- d. *Pi (bei) wo bo le juzi.
skin by I peel LE orange

In (4.20a) and (4.20c), the NP with a larger scope, juzi "orange" is placed earlier than the other NP pi "skin," which has a smaller scope. The resulting sentences are both good. In both (4.20b) and (4.20d), however, the NP with a

smaller scope, pi "skin," appears earlier, hence violating the scope restriction.

When both the patient marker ba and the agent marker bei are used in a sentence, the relative scope of the phrases also affect their relative order as shown in (4.21).

- (4.21) a. Juzi bei wo ba pi bo le.
orange by I BA skin peel LE

"The orange(s), I peeled its/their skin."

- b. *Pi bei wo ba Juzi bo le
skin by I BA orange peel LE

- c. Juzi liang ge bei wo ba pi bo le.
orange two M by I BA skin peel LE

"The oranges, I peeled two of them."

- d. *Pi liang ge (bei) wo ba Juzi bo le
skin two M by I BA orange peel LE

Since (4.21a) obeys the scope restriction, it is acceptable. The sentence in (4.21b) violates the restriction and is not acceptable. In (4.21c), all the three NPs, juzi "orange," liang ge "two," and pi "skin" are so ordered that the NP with larger scope appears earlier than those with smaller scope. In the unacceptable (4.21d), the NP pi "skin" has the smallest scope but appears in the initial position, whereas the NP liang ge "two (oranges)" has smaller scope than juzi "oranges" but precedes the latter.

4.3 Temporal Sequence and Word Order

This section will examine how temporal sequence affects the relative order of the elements in a sentence.

4.3.1 Principle of Temporal Sequence

Word order in language is iconic to some extent (Grimes 1986:1). This iconicity is indicated in the fact that "the order of elements in language parallels that in physical experience or the order of knowledge" (Greenberg 1963:103). Levelt (1981) specifies this parallel as that the "default" interpretation of the sequence is that the events occurring earlier in real life are also mentioned earlier in a sentence. This is shown in (4.22) (Brown and Yule 1985:125).

(4.22) a. She married and became pregnant.

b. She became pregnant and married.

The normal interpretation of (4.22a) is that her marriage took place before her pregnancy in reality. The interpretation of (4.22b) is that her pregnancy preceded her marriage.

In Chinese, word order is often subject to the principle of temporal sequence, i.e. earlier events are expressed earlier in sentences (Tai 1989). The principle of given-before-new, according to Tai, can be considered the subjective conceptualization of the principle of temporal sequence (Tai 1989:211). The effect of the principle of temporal sequence can be seen between two consecutive verb phrases, as shown in (4.23). Similar to the English examples in (4.22), the word orders in (4.23) also follow the actual order in which the two events took place.

- (4.23) a. Ta kai men jin qu
 he open door enter go

"He opened the door and went in."

- b. Ta jin qu kai men.
 he enter go open door

"He went in and opened the door."

In (4.23a), the person first opened the door and then entered. In (4.23b), the person first entered and then opened the door. As observed by Lu (1984) and Tai (1985), the compound verbs also follow the principle of temporal sequence, as illustrated in (4.24) (Lu 1984:37-38).

- (4.24) a. Ta ba men tui-kai le.
 he BA door push open LE

"He pushed open the door."

- b.*Ta ba men kai-tui le.
 he BA door open push LE

The relative order of the components in the compound verb tui-kai "push open" in (4.24a) reflects the actual sequence of pushing before opening, while the components in kai-tui "open push" in (4.23b) does not.⁸ Next we will focus on the influence of temporal sequence on the position of the NPs and PPs in a clause.

4.3.2 Position of PPs

The locative phrases for source precede the verb, while those for goal follow the verb, as illustrated in (4.25).

- (4.25) Ta cong Meiguo kai che dao Jianada.
 he from America drive car to Canada

"He drove from America to Canada."

The locative phrases for static location also precede the verb (4.26) and the locative phrases for goal follow the verb (4.26b).

- (4.26) a. Ta zai qiang shang tiao.
 he at wall on jump

"He jumped (up and down) on the wall."

- b. Ta tiao zai qiang shang.
 he jump at wall on

"He jumped onto the wall."

In (4.26a), the prepositional phrase zai qiang shang "on the wall" indicates the location where the person started to jump. That is, the person was already on the wall when he started to jump. Therefore the locative precedes the verb. In (4.26b), the locative phrase zai qiang shang "on the wall" indicates the location of the person after he had jumped. Therefore it placed after the verb in the sentence. The word order is so closely related to the temporal sequence of the actual events, that even the locatives marked by the same preposition zai "at" can be interpreted as static location (4.26a) or goal (4.26b) respectively according to their position in the sentence.

When the phrases for starting point and ending point both appear in the preverbal position, the starting point

precedes the ending point. Please look at the examples in (4.27).

- (4.27) a. Cong Meiguo dao Riben hen yuan.
from America to Japan very far

"It is very far from America to Japan."

- b. Cong Riben dao Meiguo hen yuan.
from Japan to America very far

"It is very far from Japan to America."

- c. *Dao Riben cong Meiguo hen yuan.
to Japan from America very far

The sentences in (4.27) describe the distance between the two locations, America and Japan. In (4.27a), the phrase cong Meiguo "from America," which indicates the starting point of measurement, precedes the phrase dao Riben, which indicates the ending point of measurement. If the speaker conceptualizes Japan, rather than America, as the starting point, then the sentence would be (4.27b), with cong Riben "from Japan" preceding dao Meiguo "to America." The order in (4.27c) is not acceptable because the ending point precedes the starting point.

4.3.3 Position of NPs

The NPs for time at which a state or event starts or exists precede the verb, as shown in (4.28).

- (4.28) a. Ta si dianzhong lai.
he four o'clock come

"He comes at four."

- b. Ta zuotian mai le shu.
he yesterday buy LE book

"He bought a book(s) yesterday."

In (4.28a), the temporal phrase si dianzhong "four o'clock" precedes the verb lai "come." The order reflects the speaker's perception of the person's coming as not earlier than the point of time. In (4.28b), the person's purchase of books takes place in the time denoted by yesterday.

The temporal phrases for duration and number of occurrences are placed after the verb, as in (4.29).

- (4.29) a. Laoshi zou le san tian/san ci. (=4.4b)
teacher walk LE three day three time

"The teacher walked three days/three times."

- b. Laoshi zou le san tian/san ci dao
teacher walk LE three day three time arrive
le.
LE

"The teacher walked three days/three times,
and then arrived."

In (4.29a), the duration and the times of the teacher's walking is not known until after he had walked. Therefore the NP for time, san tian "three days" or san ci "three times," appears after the verb zou "walk." Similarly, in (4.29b), the temporal phrases appear after the verb zou "be sick." But they do not appear after the other verb dao "arrive," again following temporal sequence.

4.4 Interrelation Between Semantic Factors

Different semantic factors, i.e. case roles, scope, and temporal sequence, may interact with each other in determining the word order of individual sentences.

Chao (1968:72) mentions that the direction of the verb may go from subject to object, or from object to subject, as shown in (4.31).⁹

- (4.31) a. Shi ge ren chi liang bang rou.
 ten M people eat two pound meat

"Ten people eat two pounds of meat."

- b. Liang bang rou chi shi ge ren
 two pound meat eat ten M person

"Two pounds of meat feeds ten people."

Li (1973:133) is correct to say that the reverse order in (4.31b) is possible because the semantic constraints from the verb limit the interpretation of (4.31b) as that of actor and object. If we use the principle of temporal sequence as an explanation, then the two different orders reflect the speaker's conceptualization of the sequence of the entities represented by the two NPs. In (4.31a), the agent shi ge ren "ten people" is perceived as the starting point or topic in discourse and thus is placed earlier in the sentence. In (4.31b), the patient liang bang rou "two pounds of meat" is perceived as the starting point or topic in discourse, and is placed first. Thus in (4.31b) the conceptualized sequence overrides case roles.¹⁰

The conceptualized sequence may also override the scope constraint by coding the element with less scope before the element with greater scope. Compare (4.32a) and (4.32b).

- (4.32) a. (Zai) na ge ban Zhang San zui yonggong.
 at that M class most hardworking

"In that class, Zhang San is most hardworking."

- b. Zhang San (zai) na ge ban zui yonggong.
 at that M class most hardworking

"Zhang San in that class is most hardworking."

In (4.32a), the phrase with greater scope, (zai) na ge ban "in that class," precedes the one with less scope, Zhang San, and the word order reflects the scope sequence. In (4.32b), however, the phrase with less scope, Zhang San, precedes the phrase with greater scope, zai na ge ban "in that class." For the speaker of (4.32b), then, the consideration of conceptualized sequence takes precedence over that of scope.

4.5 Summary

This chapter has shown that word order is closely related to the semantic factors of case roles, scope, and temporal sequence in Mandarin Chinese. The case roles that occur in a clause may limit the order of the phrases as well as the number of phrases. The scope restriction requires that phrases with greater scope in meaning precede those with lesser scope. The effect of temporal sequence proposed

by Lu (1984) and Tai (1985) is displayed as placing phrases according to the sequence of events in real world or their conceptualization in the speaker's mind. It has also been shown that these three semantic factors, all of which are related to the discourse notion of topic, may interact with each other in determining word order.

Notes

¹Since instrument must appear in a sentence together with agent and/or patient, no examples are cited for this type of sentences.

²Tsao(1987b:20-22) suggests that the feature of [+human] also influences the acceptability of certain sentences, as in (4n.1). According to Tsao, (4n.1) is more likely to mean "I like cats" than "cats like me," as I is human, and cats are nonhuman.

(4n.1) Wo mao xihuan. (p. 22)
I cat like

"I like cats."

³See Section (4.2) for a definition of scope.

⁴The relationship between definiteness and word order is discussed in Chapter V.

⁵As Professor Chauncey Chu (personal communication) points out, the possibility of deletion of the locative marker zai, as in the examples in (4.15), is a much more complex problem than is indicated by the parentheses. A detailed study is beyond the current research.

⁶The sentence in (4.16b) would be acceptable only if jintian "today" is added as an afterthought, with pauses around it.

⁷Lu (1988) remarks that the sentence in (4.18c) is unacceptable, because the first NP che "car" is moved out of another noun phrase Zhang San de che "Zhang San's car," thus violating the A-over-A constraint. However, the sentence is interpretable if the first NP che "car" refers to the cars

in general, and thus semantically contains the NP Zhang San de (che).

⁸According to Professor Chauncey Chu (personal communication), another reason why tui "push" cannot precede kai "open" is that the verb kai "open" is a state verb but the verb tui "push" is an action verb. The compound verb must contain an action verb followed by a state verb.

⁹The examples in (4.33) are taken from Chao (1968:72), with the change of spelling to the pinyin.

¹⁰As Professor Chauncey Chu (personal communication) notices, the use of the structure in (4.31b) is restricted by the nature of the verb itself and has the meaning "be enough to be consumed by." For instance, the verb kan "read" does not allow such inversion, as shown in (4n.2).

(4n.2) Si ben shu kan wu ge xuesheng.
four M book read five M student

CHAPTER V

DEFINITENESS AND WORD ORDER

A noun phrase is definite if it indicates an entity which is unique in terms of linguistic or extralinguistic contexts. The relationship between definiteness and word order has been studied in Chao (1964, 1968) and Li and Thompson (1981). Tai (1989) further relates definiteness with the principle of temporal sequence and suggests that the order of old before new reflects the conceptualized sequence in the speaker's mind. This chapter will investigate the relationship between definiteness and word order from three aspects: the unquantified nouns in Section 5.1, noun phrases with quantifiers in Section 5.2, and the influence of the NPs on each other in Section 5.3.

5.1 Unquantified NPs

Chao (1968) and Li and Thompson (1974:170-185) suggest that the noun phrase that is not modified by the definite markers, e.g. na ge "that," or the indefinite markers, e.g. yi ge "a," tends to be definite when appearing before the verb, and indefinite when appearing after the verb. This can be shown in the examples of (5.1).

- (5.1) a. Ren lai le.
 person come LE

"The person has come."
 "The people have come."

- b. Lai ren le.
 come people LE

"Somebody has come."¹
 "People have come."

- c. Chuanghu Zhang San dapo le.
 window break LE

"The window(s), Zhang San broke it/them."

- d. Zhang San chuanghu dapo le.
 window break LE

"Zhang San broke the window(s)."

- e. Zhang San dapo le chuanghu.
 break LE window

"Zhang San broke a window/some windows."

In (5.1a), the NP ren "person" precedes the verb and has a definite interpretation, i.e. "the person, the people." In (5.1b), ren "person" is placed after the verb and has an indefinite interpretation, i.e. "somebody, people." The NP chuanghu "window" in (5.1c) and (5.1d) appears before the verb dapo "break," either precedes or follows the agent Zhang San, and has a definite interpretation "the window(s)." The NP chuanghu "window" follows the verb in (5.1e) and has an indefinite interpretation "a window, windows."

As has been shown in Chu (1979a) and Sun and Givón (1985), the word order in Mandarin Chinese is predominantly Subject-Verb-Object. Sun and Givón (1985) argue that the preverbal position is not correlated with definiteness,

since a definite NP may also appear after the verb (5.2a), while an indefinite NP may also appear in front of the verb (5.2b) (Sun and Givón 1985:334-335).

- (5.2) a. Zhang Xun yi ba duo guo dian-wen.
one grab seize over electric-text

"Zhang Xun grabbed the telegram with one quick jerk."

- b. Zhi jian ta ba yi shu dianran de
only see he BA one M light-burn MOD

xianghuo kou han yi zhi.
incense mouth hold one M

"He only saw that he bit off a single stick from a bunch of burning incense."

In (5.2a), the NP dian-wen "telegram" refers to the telegram that has been mentioned in the previous text and is thus definite. The NP yi shu dianran de xianghuo "a bunch of burning incense" is indefinite but is coded in the preverbal position. Sun and Givon (1985) use the examples in (5.2) to argue that the preverbal position does not correspond to definiteness.

Two pieces of evidence support Li and Thompson's generalization about the correlation between the preverbal position and definiteness. First, as we saw in Section 2.4, the data collected by Sun and Givón from actual written and spoken texts (1985:336) prove, rather than refute, this correlation. As shown in Table 5.1 (=Table 2.1), although most of the NPs, whether definite or indefinite, occur after

the verb, most of the NPs in the preverbal position are interpreted as definite, i.e. 13 out of 16 in the written text, and 7 out of 8 in the spoken text. The correspondence exists, though not a perfect one.

Table 5.1. Word Order and Definiteness.

	<u>CATEGORY</u>	<u>WORD ORDER</u>				<u>TOTAL</u>	
		<u>VO</u>		<u>OV</u>			
		N	PCT	N	PCT	N	PCT
Written:							
	Referential						
	indefinite	276	99	3	1	279	100
	Referential						
	definite	179	93	13	7	192	100
Spoken:							
	Referential						
	indefinite	109	99	1	1	110	100
	Referential						
	definite	80	92	7	8	87	100

The second piece of evidence comes from the data collected by Gong (1986) from written stories. Of all the 64 ba-sentences that he cited, when 62 initial NPs are definite, 61 of the ba-phrases are also definite. Therefore Li and Thompson's (1974) generalizations about definiteness and word order are valid.

5.2 Quantified NPs

Quantifiers play an important role in indicating definiteness or indefiniteness in Mandarin Chinese. Demonstratives like zhe "this" and na "that" mark definiteness in addition to pointing out an entity in the actual world or emphasizing an object in contrast to another (Chu 1979b:7; Xu 1987:139). Numerals, e.g. yi "one," liang

"two," etc., can mark indefiniteness in addition to quantity (Sun 1986). Li and Thompson (1974), Sun and Givon (1985), and Zubin and Li (1986) all implicitly or explicitly agree that demonstratives and numerals may override word order in indicating definiteness.²

Now we will use na ge (which is composed of a demonstrative na "that" and a measure word ge "piece") as a definite marker, and yi ge (which is composed of a numeral yi "one" and the measure word ge) as an indefinite marker, and see how they interact with word order. First let us examine the sentences with only one argument (5.3).

- (5.3) a. Na ge ren lai le.
that M person come LE

"That person has come."

- b. ?Yi ge ren lai le.
one M person come LE

"A person has come."

- c. You yi ge ren lai le.
there be one M person come LE

"A person has come."

- d. *Lai le na ge ren.
come LE that M person

- e. Lai le yi ge ren.
come LE one M person

"A person has come."

In the initial position, a definite NP is preferred over an indefinite NP, as shown in (5.3a-b). The sentence in (5.3b) shows that it is difficult for the indefinite quantifier yi

ge to override the effect of the initial position and mark an NP as indefinite. The initial position is strongly related to definiteness. As Chu (personal communication) points out, this difficulty can be resolved by the use of you "there be" (and hence "some"), as illustrated in (5.3c). In (5.3d), as the position after certain verbs is strongly related to indefiniteness, the definite quantifier na ge "that (one)" contradicts with, but fails to override, the effect of the position, with an unacceptable result.³

Next let us see how the quantifiers may interact with word order in determining definiteness in the sentences with an agent and patient. The patient may appear in the initial position (5.4), between the agent and the verb (5.5), or in the postverbal position (5.6).

- (5.4) a. Na ge chuanghu ta dapo le.
that M window he break LE

"That window, he broke (it)."

- b. *Yi ge chuanghu ta dapo le.
one M window he break LE

"A window, he broke (it)."

- (5.5) a. Ta na ge chuanghu dapo le.
he that M window break LE

"He, that window, he broke (it)."

- b. *Ta yi ge chuanghu dapo le.
he one M window break LE

"He, a window, he broke (it)."

- (5.6) a. Ta dapo le na ge chuanghu.
he break LE that M window

"He broke that window."

- b. Ta dapo le yi ge chuanghu.
 he break LE one M window

"He broke a window."

In (5.4a), na ge marks the initial NP chuanghu as definite, and the quantifier and the word order reinforce each other in marking na ge chuanghu "that window" as definite. The resulting sentence in (5.4a) is acceptable. In (5.4b), the indefinite quantifier yi ge "a/one" contradicts with the initial position, but neither succeeds in overriding the effect of the other. The sentence in (5.4b) is therefore unacceptable, unless saved by the use of you "there be, some" in front of the patient NP yi ge chuanghu "one window," as in the case of (5.3c).

In (5.5a), the quantifier na ge "that one" again overlaps with the preverbal position in marking the NP chuanghu "window" as definite, and the sentence is good. But in (5.5b), the indefinite quantifier yi ge "one" contradicts with, and fails to override, the effect of the preverbal position, again resulting in an unacceptable sentence.

In (5.6a), the definite quantifier na ge "that" overrides word order and marks the patient chuanghu "window" as definite. In (5.6b), the indefinite quantifier yi ge "a/one," being postverbal, marks its NP as indefinite.

The observation of the interrelationship between quantifiers and word order in (5.4-6) suggests that what is

important is not whether the postverbal position corresponds to definiteness or indefiniteness. That position does not necessarily mark an NP as indefinite. What IS important is that the initial position and the preverbal position usually correspond to definiteness. Admitting that postverbal NPs are not necessarily indefinite (Sun and Givon 1985) does not mean that the correspondence between definiteness and word order does not exist in Mandarin Chinese.

5.3 Definiteness Effects Between NPs

This section investigates the relationship between a definite noun phrase and other noun phrases in the same clause and shows that definite NPs tend to appear earlier than indefinite ones.

That the order of the phrases is sensitive to their definiteness was seen in (4.12), reproduced here as (5.7).

- (5.7) a. Wo kan le ta yi ge zhongtou.
I see LE he one M hour

"I saw (i.e. visited) him/her for one hour."

- b. Ta kan le yi ge ren liang ci.
he see LE one M person two time

"S/He saw a person twice."

- c. Ta kan le yi ge zhongtou/liang ci ren.
he see LE one M hour two time person

"He saw people for one hour/twice."

- d.*Ta kan le yi ge zhongtou/liang ci
he see LE one M hour two time

yi/na ge ren.
one/that M person

In (5.7a), the patient ta "he" which is definite precedes the duration phrase yi ge zhongtou "one hour" which is indefinite. In (5.7b), the indefinite phrase yi ge ren "a person" precedes the other indefinite phrase liang ci "twice." Although both phrases are indefinite, the former is referential while the latter is nonreferential. In (5.7c), both yi ge zhongtou/liang ci "one hour/twice" and ren "person" are nonreferential, and the order is also acceptable.⁴ But when a nonreferential phrase e.g. liang ge zhongtou/liang ci "two hours/twice" appears before a referential phrase, e.g. yi ge ren "a person," or a definite phrase, e.g. na ge ren "that person," the sentence becomes unacceptable, as shown in (5.7d).

The relative order of definite before indefinite can also be found across the verb. Chu (1979:5) once discussed a problem which involves the translation of the English sentence in (5.8a). Chu suggests that (5.8c) would be a better translation than (5.8b).

(5.8) a. A belly-dancer led the wedding procession.

b. Yi wei dupi wuniang lingxian hunli hanglie.
one M belly dancer lead wedding procession

c. Hunli hanglie you yi wei dupi wuniang
wedding procession by one M belly dancer

dailing.
lead

In both (5.8b) and (5.8c), the unquantified NP hunli hanglie "wedding ceremony" is definite in the context, but the NP yi wei dupi wuniang "one belly-dancer" is marked as indefinite by the indefinite quantifier yi wei "one."⁵ Since the order of the two NPs is indefinite before definite in (5.8b), the sentence is not as appropriate as (5.8c), where the order is definite before indefinite.

That the preferred order is definite-indefinite can also be seen in the examples in (5.9), where the order is agent-verb-patient and both xuesheng "student" and shu "book" are assumed to be singular.

- (5.9) Xuesheng mai le shu.
students buy LE book

"The student bought a/the book."

As shown in (5.9), the first NP xuesheng must be interpreted as definite, while the second NP shu can be either definite or indefinite.

Definiteness also affects the relative order of the noun phrases before the verb, as shown in the topicalized sentence (5.10a), double-subject sentence (5.10b), ba-sentence (5.10c), and bei-sentence (5.10d).

- (5.10) a. Shu xuesheng mai le.
book student buy LE

"The book, the student bought it."

- b. Xuesheng shu mai le.
student book buy LE

"The student bought the book."

- c. Xuesheng ba shu mai le.
student BA book buy LE

"The student bought the/a book."

- d. Shu bei xuesheng mai le.
book BEI student buy LE

"The book was bought by the/a student."

In all the examples of (5.10), both NPs are placed before the verb and the first noun phrase must be definite. As shown in (5.10a-b), the second noun phrase is interpreted as definite when it is not explicitly marked by ba or bei. When such markers do appear, as in (5.10c-d), the second NP may also be interpreted as indefinite, though more likely as definite due to the preverbal position.⁶

5.4 Definiteness and Word Order in Texts

A study of actual texts is needed in order to test if the constraint for definiteness is valid for larger discourse units. The passage in (5.11) is taken from a newspaper story.⁷ The symbol (___) indicates the place where an NP that has been used in a previous clause is suppressed.

- (5.11) a. Shiri, dao mang huai le Jiangong de qizi
that day but busy bad LE POSS wife

Sui Lijun.

"That day saw Jiangong's wife, Sui Lijun,
extremely busy."

- b. Ta caimai le shiji jin yangrou,
she buy LE ten or so catty mutton

"She bought ten or so catties of mutton,"

- c. hai you shucai, fensi zhilei.
also there be vegetable vermicelli etc.

"there were also vegetables, vermicelli,
etc."

- d. Ren dao qi le,
person arrive all LE

"When the people all arrived,"

- e. — "hui" he "chi" tongshi jinxing.
meet and eat same time proceed

"(they) carried on the 'meeting' and 'eating'
at the same time."

- f. Zhijian Li Tuo taotao-bu-jue,
only see verbose

"It was seen that Li Tuo kept talking
verbosely,"

- g. Jiangong zhuyi bu shao,
idea not few

"Jiangong had a lot of ideas,"

- h. Zhiyun shi you youmo.
time have humor

"Zhiyun was humorous now and then."

- i. Weidu A Cheng, yiyen-bu-fa,
only quiet

"Only A Cheng, (he) did not say anything,"

- j. — zhi gu shuan yangrou,
only care dip-boil mutton

"only busy about dip-boiling the mutton,"

- k. — ziji de yi pan chi wan le,
self POSS one dish eat finish LE

"having finished eating his own plate,"

- l. — you jiang Li Tuo mianqian de yi pan
also JIANG front POSS one dish

tuo le guo lai.
draw LE over come

"also drew over the plate from in front of Li Tuo."

In (5.11a), shiri "that day" and Jiangong de qizi Sui Lijun "Jiangong's wife Sui Lijun" are both definite. In (5.11b), ta "she" is definite and preverbal, and the patient NP shi ji jin yangrou "ten or so catties of mutton" is indefinite and postverbal. In (5.11c), the NP shucai, fensi zhilei "vegetables, vermicelli, etc." is indefinite and postverbal. In (5.11d), the only NP ren "the people" is definite and is placed before the verb. In (5.11e), the agent NP, "the people," is not expressed, and the patient NP, hui he chi "meeting and eating" is definite and appears before the verb. The only NP in (5.11f) Li Tuo is definite. In (5.11g), the definite Jiangong appears earlier than the indefinite zhuyi "idea." In (5.11h), again the NP Zhiyun, which also is a proper name, appears before the verb, and the indefinite NP younuo "humor" is placed after the verb. The clause in (5.11i) has a definite NP A Cheng, a proper name, in front of the idiom yi-yan-bu-fa "not say anything." The agent in the three following clauses (5.11j-1) is still A Cheng, which has been mentioned in (5.11i) and so does not appear. The only NP present in (5.11j), yangrou "mutton," may be definite or indefinite, depending on the context. The only NP present in (5.11k), ziji de yi pan "(his) own dish," is definite because of the modifier ziji de "(his) own." The NP

present in (5.111), Li Tuo mianqian de yi pan "one dish in front of Li Tuo," may be definite, meaning "the one dish in front of Li Tuo" or indefinite, meaning "one of the dishes in front of Li Tuo," again depending on the extralinguistic context.

We saw in (5.11) that the general tendency is that definite NPs appear earlier than the indefinite NPs in the individual clauses in a text. Next let us survey one news report and two newspaper stories totaling about 7000 Chinese characters.⁸ The survey only counts the sentences with two or more noun phrases that actually occur, including those in a preposition phrase but excluding those that are not expressed (as in cases of zero pronouns). When there are more than two NPs in a clause, only the first two are counted. The results are shown in Table 5.2.

Table 5.2. Relative Order of Definite and Indefinite NPs in Texts.

	1st NP	2nd NP	N. of Clauses			Total	%
			--V	-V-	V--		
a.	Definite	Indefinite	14	110	4	128	41%
b.	Definite	Definite	66	85	0	151	48%
c.	Indefinite	Indefinite	4	13	0	17	6%
d.	Indefinite	Definite	10	6	0	16	5%
Total:			94	214	4	312	100%

The symbols "--V," "-V-," and "V--" indicate the cases where the first two NPs appear before the verb, around the verb, and after the verb, respectively.

We see that the first NPs are mostly definite (89%), the second NPs can almost equally be definite (53%) or indefinite (47%). Considering the position relative to the verb, most of the two preverbal NPs show the definite-definite order, and most of the NPs across the verb show the definite-indefinite order, supporting the finding that the preverbal position tends to code definite NPs.

The cases where both NPs appear before the verb are represented in (5.12).

(5.12) a. Definite...Indefinite:

Zai Dai Anbang de lian shang, zhouwen
 at POSS face on wrinkle
 yi qiaoqiao pa shang ta riye kuankuo
 already silently crawl up he ever broaden
 de qian'e.
 MOD forehead.

"On Dai Anbang's face, wrinkles have already
 quietly crawled up his ever broadening
 forehead."

b. Definite...Definite:

Ta-de muquang zai wo-de lian shang tingliu
 his eyes at my face on stop
 le pianke.
 LE moment

"His eyes stopped on my face for a moment."

c. Indefinite...Indefinite:

Yi ge shenchuan xizhuang-gelu de nanzi
 one M wear Western-styled suits MOD man
 zheng xiang zuo zai ta duimian xiwei de yi
 just to sit at he opposite seat MOD one

wei nianqing nuzi jieshao ziji-de shenshi.
M young woman introduce own life

"A man dressed in Western-style suits is talking about his life story to a young woman sitting in the seat across from him."

d. Indefinite...Definite:

Zai yi jia fandian li, ta-lia renshi le
at one M restaurant in they two know LE

yi wei xing Qian de fuwuyu.
one M surname MOD waiter

"In a restaurant the two of them got to know a waiter with the surname Qian."

In (5.12a), the NP huo "goods" is definite, and the other NP bie ren "other people" is indefinite. In (5.12b), both the first NP ta-de muquang "his eyes" and the second NP wo-de lian "my face" are definite. In (5.12c), both the NPs before the verb, yi ge shenchuan xizhuang-gelu de nanzi "a man dressed in Western-style suits" and zuo zai ta duimian xiwei de yi wei nianqing nuzi "a young woman sitting in the seat across from him," are indefinite. In (5.12d), yi jia fandian "a restaurant" is indefinite, and ta lia "the two of them" is definite.

The cases where the two NPs surround the verb are represented in (5.13).

(5.13) a. Definite...Indefinite:

Di-san chang jiu, shi jing ben chang de
third M wine SHI honor own plant POSS

yi ming gongren de.¹⁰
one M worker DE

"The third wine party, was in honor of a worker from this factory."

b. Definite...Definite:

Chang zhang zou jin gaijian de
factory director walk into renovate MOD

zhigong shitang.
employee mess hall

"The factory director walked in the renovated mess hall for the employees."

c. Indefinite...Indefinite:

Zai yi ci zuotan-hui shang, you ren
at one M conference on there be person

dui wo shuo....
to me say

"At a conference, there was someone who said to me...."

d. Indefinite...Definite:

Yi-pi-pi qingnian xuezi kao jin
group upon group young students test into

Nanjing Daxue Huaxue Xi.
university chemistry department

"Groups upon groups of young students pass the examinations and enter the Chemistry Department of Nanjing University."

In (5.13a) the preverbal NP di-san ci jiu "the third wine party" is definite and the postverbal NP ben chang de yi ming gongren "a worker from his own factory" is indefinite.

In (5.13b), both the preverbal NP, chang zhang "the factory director," and the postverbal NP, gaijian de zhigong shitang "the renovated mess hall for the employees," are definite.

In (5.13c), the NP yi ci zuotan-hui "a conference" and ren "person" are both indefinite. In (5.13d), the preverbal NP

yi-pi-pi qingnian xuezi "groups upon groups of young students" is indefinite, whereas the postverbal NP Nanjing Daxue Huaxue Xi "the Chemistry Department of Nanjing University" is definite.

The only cases where both NPs appear after the verb are in the order of definite-indefinite, as shown in (5.14).

(5.14) Definite...Indefinite:

Lingwai hai ke duo fugei ni
in addition also can more pay you

xie baochou.
some reward

"In addition (we) can also pay you some more
as a reward."

In (5.14), the first NP after the verb, ni "you," is definite, and the second NP after the verb, xie baochou "some reward," is indefinite.

5.5 Summary

This chapter has discussed the relationship between definiteness and word order from the viewpoint of three aspects: the definiteness of an unquantified NP and its position, the effects of quantifiers and word order, and the relative order of different NPs in the same clause. Definite NPs tend to be placed in the initial position or in front of the verb. Definite quantifiers, such as na ge "that one," can mark an NP as definite in any position in a clause. But the indefinite quantifiers, such as yi ge "one," is not

enough to mark an NP as indefinite in the initial position without a preceding you "there be, some." The data from actual texts convincingly prove the tendency of coding definite NPs in an earlier position in a clause.

Notes

¹A plain noun may have a singular or plural interpretation, depending on the context.

²Professor William Sullivan (personal communication) suggests that contradictory signals are an explicit paradox and are generally rejected by the language. Such contradictions are shown in the sentences (5.4b) and (5.5b) later.

³See Huang (1987; 1988b) for the discussion of the group of the intransitive verbs that show the "definiteness effects."

⁴As Professor Chauncey Chu (personal communication) points out, there can also be a subordinate marker de between the duration or occurrence and the patient in (5.7c). In that case, the duration or occurrence phrase is formally coded as a modifier of the patient.

⁵The indefinite quantifier yi wei shows more respect than yi ge.

⁶The author owes the idea to his discussions with Professor Chauncey Chu, who also suggests that the animacy of the noun phrases plays some role in the interpretation.

⁷People's Daily (Overseas edition), Jan. 21, 1987.

⁸The three articles are: Si meng fei meng [Dreaming or not] (China Youth, May 11, 1986); San ci jing jiu [Three toasts] (People's Daily, April 17, 1987); and Ci ri zhongliu zi zai xing [Strolling leisurely in the rapids] (People's Daily, October 24, 1987). It is difficult to say how many "words" the stories contain, since the term "word" has not been satisfactorily defined for Chinese.

⁹In Table 5.2, the indefinite NPs include both referential indefinite NPs and nonreferential indefinite NPs.

¹⁰The second de in (5.13a) is a nominalizer.

CHAPTER VI TOPIC STRUCTURES

A simple sentence is composed of a clause with or without another clause embedded as its noun phrase or relative clause (cf. Section 3.1). A complex sentence is composed of a main clause with another clause embedded as its adverbial phrase. A compound sentence has two or more clauses conjoined together. This chapter describes the topic structures of the simple sentence. The topic structures of the complex sentence and the compound sentence will be treated as topic chains and discussed in Chapter VII.

Section 6.1 presents the formal features of topic and comment. Section 6.2 explores the semantic and discourse features of topic in Chinese. Section 6.3 discusses the transformational approach to topic-comment structures. Section 6.4 examines clauses with one topic. Section 6.5 describes clauses with two or more topics. Section 6.6 looks at clauses marked with shi...de, where the comment may precede the topic. Section 6.7 is a summary.

6.1 Formal Features of Topic

Topic, as defined in Section 1.2, is what the clause is about.¹ In this study, the phrase that expresses the topic is called a clause topic, just to simplify the discussion.

That is, when a phrase is said to be the "topic" of a clause, it simply means that the referent of that phrase is the topic. In addition, the use of the term "clause topic" does not necessarily mean that a clause always has a topic, especially when it is out of linguistic and/or extralinguistic context. It just means that it is possible that a clause has a topic structure, which very often is relevant to a larger discourse unit. The topic of a clause, however, is different from, though almost always related to, the topic in a higher sentence or paragraph. When a clause has two or more topics, primary, secondary, etc., the primary topic is more likely to be also the topic of the larger discourse unit, a topic chain, for example. In turn, the primary topic of a topic chain is more likely to be the topic of the larger discourse unit containing the topic chain.

Since topic and comment are more consistently coded by the word order of the individual clauses in Chinese, the language is said to be topic-prominent. This consistency is shown in coding a topic before its comment in a clause. It is therefore practicable to discuss the notion of topic at the clause level in Chinese.

The topic in a clause can be a noun phrase (6.1a), a prepositional phrase (6.1b), an embedded clause with (6.1c) or without (6.1d) an initial noun phrase. In (6.1a), the NP Zhang Xiansheng "Mr. Zhang" is the topic and mai shu "bought

a book/books" provides a comment. In (6.1b), the prepositional phrase zai shan shang "mountain top" is the topic, and the rest of the sentence is its comment, which describes the mountain by stating that some entity, i.e. fangzi "house(s)," exists at that location. The locative can appear alone, without the preceding preposition zai (cf. Section 6.4.2). In (6.1c) the embedded clause ta pao "he runs" is the topic and the rest of the sentence hen hao "very good" is its comment. In (6.1d), the VP mai shu "buy a book/books" is the topic, and the other VP hen rongyi "very easy" describes it as easy.

- (6.1) a. Zhang Xiansheng mai le shu.
 buy LE book

"Mr. Zhang bought a book."

- b. Zai shan shang you fangzi.
 at mountain on there be house

"On the mountain there is a house/are houses."

- c. Ta pao hen hao.
 he run very good

"That he runs is very good."

- d. Mai shu hen rongyi.
 buy book very easy

"Buying (a) book(s) is very easy."

A verb phrase or a prepositional phrase is not further analyzable into topic and comment. For instance, the verb phrase mai le shu "bought a book(s)" in (6.1a), or the prepositional phrase zai shan shang "on the mountain" in

(6.1b), is not composed of another structure of topic and comment. The verb alone can be a topic only when it is nominalized as an NP, which is usually indicated by its position in the clause or is marked by de, as we will see in the sentence with a postverbal descriptive complement in Section 6.5.3 and in the shi...de structure as shown in (6.2). Because prepositions serve as case markers in Chinese, they cannot be a topic or comment by themselves.

All the topics in (6.1) are located in the initial position of the sentence. Sometimes, however, the topic may follow the comment, as shown in (6.2).

- (6.2) a. Shi ta mai shu de.
 be he buy book NOM

"It was he that bought a book/books."

In (6.2), the ta "he" following shi is the comment, and the VP mai shu "buy (a) book(s)," which is marked by the nominalizer de, is the topic.²

The topic-comment structure of a sentence may be complex, and there may be another topic structure within the topic or comment of a clause, as shown in (6.3) (Chu 1979:116). In (6.3), ta "he" is the high topic of the sentence, and the rest of the sentence is its comment. Within the comment, there is another topic-comment structure, in which chuanghu "window" is the topic, and dapo le "broke" is the comment. Following Tsao (1987), a higher topic like ta "he" in (6.3) is called a primary topic, and

- (6.3) a. Ta ba chuanghu dapo le.
 he BA window break LE

"He broke the window(s)."

b.

Topic	Comment	
ta	Topic	Comment
	ba chuanghu	dapo le

a lower topic like chuanghu "window" with or without a preceding ba is called a secondary topic.

6.2 Semantic and Discourse Features of Topic

Chapter IV showed that word order is closely related to the semantic factors of case roles, scope, and temporal sequence. Chapter V showed that definite NPs tend to occur earlier in a clause. In this section we will examine how those features combine to characterize the clause topic.

6.2.1 Case Roles

In Chinese, NPs with different case roles can be coded as the topic in a clause, e.g. agent, patient, locative, time, beneficiary, instrument.

The agent can be the topic in a clause, as shown in (6.4).

- (6.4) Ta mai le shu.
 he buy LE book

"He bought a book/books."

The patient can be the topic of a clause, as shown in (6.5).

- (6.5) Shu mai le.
book buy LE

"The book, (one) bought (it)."

The locative can also be the topic, as shown in (6.6a). But the locative indicating goal or destination cannot be the topic. For instance, dao Suzhou in (6.6b) can only be interpreted as a full verb phrase, meaning "went to Suzhou" when coded as the topic.

- (6.6) a. (Zai) Ouzhou wo you yi ge laoshi.
at Europe I have one M teacher

"In Europe I have a teacher."

- b. Dao Ouzhou women pao.
to Europe we run

"We went to Suzhou to run."

*"We ran to Suzhou."

The static location Ouzhou "in Europe" is the topic in (6.6a), and the preposition zai "at" is optional.

Temporal phrases except duration and number of occurrences can be freely coded as topic, as in (6.7a). When the phrase for duration or number of occurrences is coded in the preverbal position as the primary topic, as in (6.7b), it is marked as definite by the quantifiers like zhe "this/these" or na "that/those."

- (6.7) a. (Zai) qunian ta mai le na ben shu.
at last year he buy LE that M book

"Last year, he bought that book."

- b. Na san nian/ci ta (dou) kan le shu.
that three year time he all read LE book

"(All) those three years/times, he spent on reading."

As seen in (6.7b), the phrase for duration or number of occurrences is made definite by the quantifier na "that," and the adverb dou "all" must be used to relate the topic to the verb phrase. The use of extra lexical markers for a duration or occurrence topic suggests that it is more difficult to mark such phrases as topics than agent, patient, static locative, and temporal phrases.

When the beneficiary is coded as the primary topic, the preposition gei "for" is needed to indicate its semantic relation to the verb (6.8).

- (6.8) a. Zhang Xiansheng wo gei (ta) mai le
Mr. I for he buy LE

yi ben shu.
one M book

"Mr. Zhang, I bought him a book."

- b. Gei Zhang Xiansheng wo mai le yi ben shu.
Mr. I buy LE one M book

"For Mr. Zhang, I bought a book."

In (6.8a), the beneficiary Zhang Xiansheng "Mr. Zhang" is the topic. In addition to an obligatory gei "for" in the comment, it is also possible to use a resumptive pronoun ta

"he" after the preposition. In (6.8b), where the beneficiary marker gei "for" is not used in the comment, it is used directly before the topic. The fact that gei "for" is obligatory in both (6.8a) and (6.8b) suggests that the beneficiary phrase is also more difficult to be coded as topic than agent, patient, static locative, and temporal phrases.

It is also difficult to mark the instrument as the primary topic, as shown in (6.9).

- (6.9) a. Yong jisuanji wo xie wenzhang.
with computer I write article

"With the computer, I write articles."

- b. Jisuanji wo yong ta xie wenzhang.
computer I with/use it write article

"The computer, I write articles on (it)."

- c. Jisuanji wo yong lai xie wenzhang.
computer I use come write article

"The computer, I use (it) to write articles."

In all the sentences in (6.9), the instrument marker yong "with" is necessary to indicate the semantic relation between the topic and the verb. If the instrument marker yong "with" is not placed before the topic, it must be followed by the resumptive pronoun ta "it" (6.9b), or the verb lai "come" (6.9c).

Since the primary topic is the starting point for the clause, it is likely to code the most salient entity in discourse as topic. As agent is more salient than the other

case roles, it would be more natural to be so coded than the other case roles (Chafe 1975; cf. Chu 1984a:133). The examples in (6.4) and (6.5) show that no markers other than word order are necessary to code the agent or patient as a topic. Locative and time phrases are also more likely to be coded as topic, except for the case role of goal (6.6b), or that of duration or the number of occurrences (6.7). The examples in (6.8-9) show that it is less likely to code the beneficiary or instrument as a topic, and the case markers, gei for beneficiary, and yong for instrument, are used.

6.2.2 Scope and Temporal Sequence

A higher topic, e.g. a primary topic, would have a greater semantic scope than the lower topics or nontopics in the same clause. This is illustrated in (6.10).

- (6.10) a. Tamen Zhang Xiansheng mai le shu.
 they Mr. buy LE book

"Among them, Mr. Zhang bought a book/books."

- b. (Zai) Ouzhou wo qu guo Yidali.
 at Europe I go to EXP Italy

"(In) Europe, I have been to Italy."

The primary topic of the sentence in (6.10a), tamen "they," referentially contains the secondary topic Zhang Xiansheng "Mr. Zhang." In (6.10b), the first locative Ouzhou "Europe" is the topic of the sentence, and has a larger scope than the other locative Yidali "Italy."

Sometimes the topic might seem to have a smaller semantic scope. Let us examine the examples in (6.11).

- (6.11) a. Daxiang bizi hen chang.
elephant nose very long

"Elephants, (their) trunks are very long."

- b. ?Bizi daxiang hen chang.
nose elephant very long

"Noses, those of the elephants are very long."

- c. Bizi daxiang de hen chang.
nose elephant POSS very long

"Noses, (those of) the elephants are very long."

In (4.11a), the possessor daxiang "elephants," which has greater scope than the other NP bizi "nose," is also positioned as the primary topic of the sentence. The topic structure in (6.11b) is acceptable only if the primary topic bizi is conceptualized as having a larger scope, meaning "noses in general," and the other NP daxiang "elephants" is interpreted as having a smaller scope, meaning "(those of) the elephants." Even in this interpretation, the acceptability of (6.11b) is still marginal. This same scope relationship is more clearly brought out when de, a possessive marker is used after the secondary topic daxiang "elephants" (6.11c).

Topics tend to represent the events that occur earlier in reality, or the events that are conceptualized as occurring earlier in the processing of information. This is

shown by the fact that the static location or source is more easily coded as topic while the goal tends to be coded as part of the comment after the verb (6.6). The static time tends to be topic while the duration or number of occurrences tends to be part of the comment (6.7). As seen in Section 4.3, the phrase of source precedes the phrase of goal, as shown in (4.27), reproduced as (6.12).

- (6.12) a. Cong Meiguo dao Riben hen yuan.
from America to Japan very far

"It is very far from America to Japan."

- b. Cong Riben dao Meiguo hen yuan.
from Japan to America very far

"It is very far from Japan to America."

- c. *Dao Riben cong Meiguo hen yuan.
to Japan from America very far

In (6.12a), the source, cong Meiguo "from America," is coded as the primary topic, and the goal, dao Riben "to Japan," is coded as the secondary topic. Similarly, in (6.12b), the source, cong Riben "from Japan," is the primary topic and the goal, dao Meiguo "to America," is the secondary topic. When the goal, instead of the source, is the primary topic, the sentence is not acceptable, as shown in (6.12c).

Very often the speaker imposes a conceptualized sequence on the entities in reality. In the examples of (4.30), reproduced as (6.13), either the father or the son can be coded earlier in the clause.

- (6.13) a. Zhang San fugin you qian.
father have money

"Zhang San, (his/her) father is rich."

- b. Zhang Xiansheng erzi you qian.
Mr. son have money

"Mr. Zhang/Zhang Ming, his son is rich."

In (6.13a), Zhang San, the son, is the primary topic, whereas in (6.13b), Zhang Xiansheng "Mr. Zhang," the father, is the primary topic.

6.2.3 Definiteness

Definite NPs tend to be more topical, and thus are coded in an earlier position in a clause. However, definite NPs are not always topics. As Chu (1984a:139) argues, the initial position in Mandarin tends to be the position of the topic, the non-initial preverbal position tends to be the position of a definite but less topical noun phrase, and the postverbal position tends to be the position of a noun phrase which is non-topical and indefinite. For instance, in the ba-sentence in (6.3), reproduced as (6.14), both the main topic and the secondary topic introduced by ba tend to be definite. The noun phrase chuanghu "window" is the lower topic in (6.14a) and is almost always definite. Surveying all the 64 ba-sentences collected in Gong (1986), we see that of the 64 primary topics, 62 are definite, one is nonreferential indefinite, and one is referential indefinite. Of the 64 secondary topics marked by ba, 61 are

- (6.14) a. Ta ba chuanghu dapo le.
 he BA window break LE

"He broke the/a window(s)."

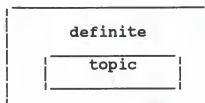
b.

Topic	Comment	
ta	Topic	Comment
	ba chuanghu	dapo le

definite, one is nonreferential, and two are indefinite.³

Zubin and Li (1986) specify the relation between topic and definiteness as two implications: topic implicates definiteness, and indefiniteness implicates non-topic, as illustrated in (6.15).

(6.15)



Their implication statements specify that a topic is necessarily definite. If we consider the fact that secondary topics can be indefinite, as shown in the ba-sentence in (6.14), the statements are too powerful by ruling out indefinite topics. It is therefore safer to say that topics, especially primary topics, are much more likely to be definite than the other noun phrases.

To summarize, higher topics tend to carry the case roles that are more prominent in the mind of the speaker, such as agent and patient, which are major participants in discourse, or the case roles that provide background information, such as static locative and temporal phrases. Higher topics tend to bear greater scope than lower topics and nontopics. They also tend to indicate the entities or events that either occur earlier in reality or are conceptualized by the speaker as occurring earlier in the process of communication. Finally higher topics are almost always definite in discourse.

6.3 Transformational Approach

One way to describe the topic structures in Mandarin Chinese is to use a transformation to move the topic to the clause initial position. This section will examine the transformational description of the topic structures.

The approaches in transformational-generative grammar (Washburn 1975; Jeng 1977; Huang 1980; Xu & Langendoen 1985; Lu 1988) posit a phrase-structure rule (6.16a) to generate the node TOP for topic in the clause-initial position. The transformational rule of topicalization then moves the element which is the topic out of the lower clause into the TOP position (6.16b-c).

(6.16) a. S' -> TOP S

- b. Zhang Xiansheng [____ mai le shu].
Mr. buy LE book

"Mr. Zhang bought a book."

- c. Shu [Zhang Xiansheng mai le ____].
book Mr. buy LE

"The book(s) Mr. Zhang bought."

The brackets indicate the comment and the symbol "____" indicates the position from which the topic is moved out. In (6.16b), the NP Zhang Xiansheng "Mr. Zhang" is moved out of the position marked by "____" in the lower clause into the TOP position. In (6.16c), the patient shu "book(s)" is moved to the TOP position.

However, the topic may not be an argument of the verb and therefore cannot be moved out of the lower clause. Let look at (6.17) (Li and Thompson 1981:96).

- (6.17) Na chang huo xingkui xiaofang-dui
that M fire fortunate fire brigade

lai de kuai.
come NOM fast

"That fire, it was fortunate that the firemen came fast."

In (6.17), it is hard to say what case roles the topic na chang huo "that fire" bears to the verb. The topic is related to the comment as a whole, not necessarily related to the verb alone.

In order to account for the topic structures like (6.17), Huang (1980) suggests that, while the topics in

(6.16b-c) are moved out of the comment, those like the one in (6.17) are base-generated in the TOP position. However, the transformational approach may still face several problems.

First, some empty categories in the comment are not the trace left by transformation, as shown in (6.18).

- (6.18) a. Shu ta jie zou le wo de ____.
book he borrow away LE I POSS

"Books, he borrowed mine."

- b. Shu ta jie zou le wo de shu.
book he borrow away LE I POSS book

"Books, he borrowed mine."

According to Lu (1988), (6.18a) is not acceptable, because its topicalization movement moves one NP, shu "book," out of another NP wo de shu "my book(s)," and violates the A-over-A constraint. But, as we see, the sentence in (6.18a) is acceptable if the NP shu "book(s)" has a larger scope than the other NP ta de (shu) "his (books)." That is, "books" include "his (books)." If the topic has a larger scope, as can be the case in (6.18a), then it could not have moved out of the other NP and cannot be coreferential with the empty category after wo de. If the topic is not moved out, the A-over-A constraint cannot be violated. But the sentence is also acceptable if the noun shu "book(s)" is used after wo de "my," as shown in (6.18b). That suggests that there is some element suppressed after wo de "my" in (6.18a).

On one hand, we have an empty category in (6.18a). On the other hand, there is a topic that is not moved out of that empty category. The dilemma is solved if we derive every topic at its surface position, and attribute the suppression of some element in the comment to its semantic, not strictly coreferential, relationship with the topic. In (6.18a), for instance, the noun shu "book(s)" is suppressed after wo de "my" because it is semantically contained by the topic.

Secondly, the transformational approach only accounts for the clauses that are traditionally called sentences of topicalization (Li & Thompson 1981), and does not deal with other kinds of topic structures. For instance, the clauses with the particles ba, bei, you, zai, etc., those with shi...de structure, de-complement, and subject-verb inversion, are also topic structures, at least for a growing number of Chinese syntacticians. The topic structures can also be multilayered, as in the double-subject sentences. The topic may also appear after the comment, as in the case of the shi...de structure. Even though we could reapply the transformation of topicalization to get more than one layer of topic structures with the double-subject sentences (Xu and Langendoen 1985), still the structures marked by the particles ba, bei, etc. and the shi...de structure cannot be appropriately described.

Thirdly, the use of the terms "subject" and "predicate" are the result of the influence from the description of the Indo-European languages, in which the subject is more consistently marked by verb agreement in addition to word order. The inappropriateness of the terms can be seen in the controversy over whether the postverbal phrase with de is the main predicate/VP or the secondary predicate/VP (Huang 1988a). Look at the example in (6.19).

(6.19) Ta pao de kuai.
he run NOM fast

"He runs fast."

One side argues that the VP before de, i.e. pao "run," is the main predicate, because the VP kuai "fast" following de describes it as its adverbial. The other side argues that the VP kuai "fast" after de is the main predicate, since it is predicative of the first phrase. The structure would become clear if we use topic and comment to describe it: the first VP is the topic and the second VP is the comment. The first VP is commented on by the second VP, which describes or is "predicative" of the first VP.

In the following description of the topic structures, the clauses will be classified into three groups: simple topic structures with only one layer of topic and comment, multitopic structures with more than one layer of topic and comment, and inverted topic structures marked with shi...de.

6.4 Sentences with One Topic

This section will discuss the simple topic structures, which have only one layer of topic and comment. They include the sentences with one NP or PP before the verb, the existential sentences, and the sentences with "inverted subjects."⁴

The first type of clauses in this group are those with a noun phrase or preposition phrase as the clause topic, as illustrated by (6.20).

- (6.20) Zhang Xiansheng mai le shu.
 Mr. buy LE book

"Mr. Zhang bought a book."

The noun phrase referring to the buyer of the book Zhang Xiansheng "Mr. Zhang" is the topic in (6.20). The rest of the sentence, including the patient shu "book(s)," is the comment part of the clause.

The second type of simple topic structures are the sentences with you "there be" or zai "at," as shown in (6.21a) and (6.21b).

- (6.21) a. (Zai) shan shang you fangzi.
 at mountain top there be house

"On the mountain there is a house/are houses."

- b. Fangzi zai shan shang.
 house at mountain top

"The house(s) is/are on the mountain."

In (6.21a), the topic is the location shan shang "the mountain top." In (6.21b), the topic is the entity that exists, i.e. fangzi "house(s)."

The third type of simple topic structures are the clauses with an NP after the verb. They are "inverted" sentences⁴ because traditionally the NP after the verb is regarded as the "subject," as in (6.22a) and (6.22c).

- (6.22) a. Zuotian lai ren le.
yesterday come person LE

"Somebody/people came yesterday."

- b. Ren zuotian lai le.
person yesterday come LE

"The person(s) came yesterday."

- c. Wang Mian si le fugin.
die LE father

"Wang Mian, his father died."

Huang (1988b) regards the verbs that only subcategorize for one object as ergative verbs, e.g. lai "come" in (6.22a-b) and si "die" in (6.22c). The definiteness effect is shown with such verbs in that the indefinite objects remain in the postverbal position (6.22a), while the definite objects are raised to the initial position (6.22b).

But the definiteness effect does not raise the noun phrase fugin "father" to the initial position in (6.22c), even though it is definite. Here what blocks fugin "father" from being raised is not the definiteness effect. Rather, the blocking is due to the topic effect: the other NP, Wang

Mian, is already coded as the topic at the beginning of the clause.

6.5 Sentences with Two or More Topics

The multitopic structures are clauses which have a lower topic-comment structure embedded in the topic or comment of the whole clause. In this group are clauses with two preverbal noun phrases, the ba-sentence, the bei-sentence, and clauses with the postverbal resultative or descriptive complement.

6.5.1 Two or More Preverbal NPs or PPs

The first type of multitopic structures include clauses with two or more NPs or PPs before the verb, as in (6.23).

- (6.23) a. Zhang Xiansheng shu mai le.
Mr. book buy LE

"Mr. Zhang, the book(s) (he) bought."

- b. Shu Zhang Xiansheng mai le.
book Mr. buy LE
"The book(s), Mr. Zhang bought it/them."

- c. Zhang Xiansheng fugin hen youqian.
Mr. father very rich

"Mr. Zhang, (his) father is very rich."

- d. Zai shudian Zhang Xiansheng mai le shu.
at bookstore Mr. buy LE book

"Mr. Zhang bought a book(s) at the bookstore."

In (6.23a), the agent Zhang Xiansheng "Mr. Zhang" is the primary topic and the patient shu "book" is the secondary

topic. In (6.23b), the patient shu "book(s)" is the primary topic and within the comment, the agent NP Zhang Xiansheng "Mr. Zhang" is the topic and the VP mai le "bought" is its comment. In (6.24c), the first NP Zhang Xiansheng "Mr. Zhang" is the primary topic and the second NP fugin "father" is the secondary topic. In (6.24d), the PP for location zai shudian "at the bookstore" is the main topic and Zhang Xiansheng "Mr. Zhang" is the secondary topic.

The topic structures of (6.23a) and (6.23b) are illustrated in (6.24a) and (6.24b) respectively.

(6.24) a.



b.



6.5.2 Ba-Sentence and Bei-Sentence

The second type of multitopic structures are the ba-sentence (Chu 1987:215-216; Tsao 1987a) and the bei-sentence (Lu 1988). The two particles, ba and bei, which mark different case roles, also have the discourse function of marking the following noun phrase as a lower topic. The two

are different in that ba is used to mark a patient or locative, whereas bei is used to mark an agent or experiencer.

- (6.25) a. Zhang Xiansheng ba shu mai le.
Mr. BA book buy LE

"Mr. Zhang bought the book(s)."

- b. Shu bei Zhang Xiansheng mai le.
book BEI Mr. buy LE

"The book(s) was/were bought by Mr. Zhang."

In (6.25a), Zhang Xiansheng "Mr. Zhang" is the primary topic, and the patient shu "books" marked by ba is the secondary topic. In (6.25b), shu "books" is the primary topic, while the agent Zhang Xiansheng "Mr. Zhang" is the secondary topic, marked by bei.

6.5.3 Resultative and Descriptive Complements

The third type of multitopic structures are those with a postverbal resultative as in (6.26a) and (6.26c), or descriptive complement as in (6.26b) and (6.26d).

- (6.26) a. Ta pao de hen lei.
he run DE very tired

"He ran so that he was very tired."

- b. Ta pao de hen kuai.
he run DE very fast

"He runs/ran very fast."

- c. Ta kan shu kan de hen lei.
he read book read DE very tire

"He reads books so he is very tired."

- d. Ta kan shu kan de hen kuai.
he read book read DE very fast

"He reads books very fast."

In all the sentences of (6.26), the noun phrase ta "he" is the main topic, and the particle de is used to mark the preceding VP as a secondary topic. In (6.26a) and (6.26b), the first VP pao de "run" is marked by de as a nominalized VP and the secondary topic, and the VP hen lei "very tired" (6.26a) and hen kuai "very fast" (6.26b) as its comment. In (6.26c) and (6.26d), the verb is reduplicated since the verb phrase to be nominalized, i.e. kan shu "read books," contains a patient. Again, the nominalized VP is the secondary topic, with the postverbal complement as its comment. The topic structures of (6.26) can be illustrated as in (6.27).

(6.27)



The analysis of the sentence in (6.27) as composed of two layers of topic-comment structures was already suggested in Chao (1968:357). The description of the sentences in (6.26c-d) with verb-copying as multitopic structures is also suggested in Tsao (1987d).⁵

The multitopic analysis is supported by the fact that the topic-comment boundary markers such as a pause particle a can be used either after ta "he," after pao de "run," or in both positions, as shown in (6.28).⁶

- (6.28) a. Ta (a), pao de (a) hen lei/kuai.
 he ah run DE ah very tired/fast

"He runs (and he is) very tired/fast."

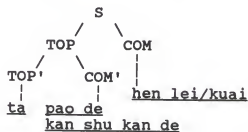
- b. Ta (a), kan shu (a), kan de (a),
 he ah read book ah read DE ah
 hen lei/kuai.
 very tire/fast

"He reads books (and is) very tired/fast."

In (6.28a), the pause particle can be inserted either after ta, after pao de, or in both positions. Similarly, in (6.28b), the pause particle can be inserted either after ta "he," after kan shu "read books," or in both positions.

The fact that a pause or pause particle is possible between de and the complement hen lei/kuai "very tired/fast" suggests that the tree diagram in (6.29) can also be a possible topic structure for the sentences in (6.26).⁷

(6.29)



In (6.29), the clause ta pao "he runs" or ta kan shu "he reads books" is the primary topic, in which there is a lower topic ta and a lower comment pao or kan shu. The complement hen lei/kuai serves as the primary comment. Whether (6.27) or (6.29) is more desirable is still a controversy in the analysis of the structure.

6.6 Shi...De Structure

The topic structures marked by shi...de are traditionally known as "cleft sentences" (Teng 1979). First we will look at the two morphemes, shi and de before we describe the sentences with them.

6.6.1 Shi and De

The word shi "be" is a copular verb. The word de can be used to mark the preceding phrase as a possessor or some type of modifier, or as a nominalized VP. When both shi and de are used together in a sentence, the sentence is said to have a shi...de structure (or construction), or cleft structure, as in (6.30).⁸

- (6.30) a. Shi ta zuotian mai shu de.
be he yesterday buy book DE

"It was he that bought a book/books
yesterday."

- b. Ta shi zuotian mai shu de.
he be yesterday buy book DE

"It was yesterday that he bought
a book/books."

In the sentences of (6.30), shi is used to mark the following element as a focused comment (Teng 1979; Chu 1985). The elements marked by shi are usually NPs and PPs which normally do not function as comment. The particle de, on the other hand, marks the preceding part, either one or more phrases, as a topic. The function of de here is the same as in the sentences with a postverbal resultative or descriptive complement as in (6.26), that is, marking a VP as a topic.⁹

6.6.2 Huang's Analysis

Huang (1988b) analyzes shi as an ergative auxiliary verb which subcategorizes for a clause as its deep structure object. The placement of shi is then attributed to the raising of an element to the initial position before shi. According to Huang, (6.30a) keeps the deep structure order, with the NP ta "he" not raised, while the NP ta "he" in (6.30b) is raised to the initial position.

Huang would derive (6.30a) and (6.30b) from different deep structures (6.31a) and (6.31b) respectively.

- (6.31) a. Zuotian shi ta mai shu de.
yesterday be he buy book NOM

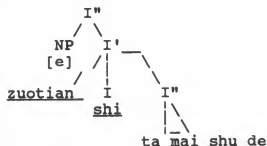
"Yesterday it was he that bought
a book/books."

- b. Shi ta zuotian mai shu de.
be he yesterday buy book NOM

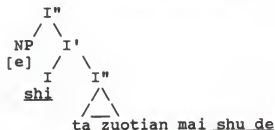
"It was he that bought a book/books
yesterday."

The difference between the deep structures in (6.31a) and (6.31b) is in the position of the temporal phrase zuotian "yesterday" as shown in (6.32).

(6.32) a.



b.



In (6.32a), zuotian "yesterday" precedes the head of I' (INFL-bar), while in (6.32b) zuotian "yesterday" is in the I'' (INFL-double bar), which is a clausal complement of the auxiliary shi.

Setting up two different deep structures for (6.31a) and (6.31b) seems to miss a more general description of the shi...de sentences. The analysis relates some of the shi...de structures to each other but treats other shi...de structures as different from them, although they are semantically and syntactically very similar.

6.6.3 Topic-Comment Analysis

With a topic-comment analysis, the sentences in (6.31) can be illustrated as in (6.33), where the element

immediately following shi is a comment, and the element immediately preceding de is a topic.

(6.33) a.



b.



In (6.33a), the temporal phrase zuotian "yesterday" is the primary topic, with the rest of the sentence as its comment. Within the comment, the pronoun ta "he" is marked by shi as a comment and mai shu "buy books" is marked by de as a topic. Since ta "he" is a comment within a comment, it is the most rhematic element, i.e. a focussed comment in the whole sentence. In (6.33b), shi overrides the initial position and marks ta "he" as the primary comment, and de marks either the verb phrase zuotian mai shu "bought a book/books yesterday" or mai shu "buy a book/books" alone as a topic. The unmarked zuotian "yesterday" in the main topic, which occurs between the most rhematic and the most thematic parts of the sentence, is less topical than mai shu "buy a book/books" and more topical than ta "he."

As shi is used to mark the following phrase as a focussed comment, and de is used to mark the preceding phrase as a presupposed topic, the function of the shi...de structure then is to mark the topic structure of a clause by using both word order and lexical devices. The topic structure marked by shi...de differs from the other topic structures discussed in Sections 6.4 and 6.5 in that a comment precedes a topic. In (6.33a), for instance, the lower comment ta "he," marked by shi, precedes the lower topic mai shu "buy a book(s)," marked by de. In (6.33b), the primary comment ta "he," marked by shi, precedes the primary topic zuotian mai shu "bought a book(s) yesterday," marked by de.

Related to the shi...de structure are the pseudo-cleft sentences, as illustrated in (6.34).

- (6.34) a. Ta zuotian mai de shi shu.
he yesterday buy DE SHI book

"What he bought yesterday was a
book/were books."

- b. Zuotian mai shu de shi ta.
yesterday buy book DE SHI he

"(The person who) bought a book/books
was he."

In (6.34a), the topic is ta zuotian mai "he bought yesterday," and the comment is shu "a book/books." In (6.34b), the topic is zuotian mai shu "bought a book/books yesterday," and the comment is ta "he."

By comparing the shi...de sentences in (6.30) and the pseudo-cleft sentences in (6.34), we see that the two kinds of structures are similar in using shi to mark the following element as a comment, and using de to mark the preceding element as a topic. The difference between the two is that, while the pseudo-cleft structure retains the usual order of topic before comment, the shi...de structure may have an unusual order of topic after comment.

The fact that topic may appear after comment is also seen in the "after-thought" sentence as (6.35) (Chao 1968).

- (6.35) Yao shui le, wo.
want sleep LE I

"I am going to sleep."

Packard (1986) points out that both shi...de structures and after-thought sentences are used to focus on new information in the initial position. He argues that the main predicate is preposed to the initial position in an after-thought sentence like (6.35). Despite his formal approach which we do not adopt, Packard's observation that the initial position can be a marked position for new information in Chinese lends support to the description of the shi...de structure here.

6.7 Summary

This chapter has examined the topic structures in Chinese. The more prominent case roles are more likely to be

coded as topic. The main topic usually has a larger scope or represents an entity which appears earlier in reality or subjective conceptualization. Topics tend to be definite. The topic structure is not limited to what is traditionally called "topicalization." Many other structures, e.g. the ba-sentence, bei-sentence, you-sentence, and shi...de sentence, can also be described in terms of topic and comment. There may be more than one level of topic and comment, e.g. in the multitopic structures using the particles ba and bei. The order of topic and comment may also be inverted in cases where the comment needs to be more prominently marked.

Notes

¹As Professor Chauncey Chu (personal communication) points out, a clause can be topic-less, as in (6n.1).

(6n.1) Xia yu le.
fall rain LE
"It is raining now."

²The shi...de structure is treated in detail in Section 6.6.

³Hsueh (1987) even suggests that the NP marked by ba is the primary topic of the sentence.

⁴Chao (1968:69) uses the term "inverted subjects" to describe the sentences in (6.22).

⁵Tsao (1987d) classifies the sentences in (26c-d), where the verb is reduplicated, as a multitopic structure, in which the verb phrase, ta "he" is the primary topic and kan shu "read books" is the secondary topic. But the verb in (26a-b), where it is not reduplicated, should also be regarded as a secondary topic.

⁶The fact that a pause particle can be inserted either before or after the reduplicated part kan de "read" in

(6.28b) may suggest the analysis of the reduplicated part as a topic. But since the reduplicated part, unlike an NP or PP, cannot be placed at the beginning to be the primary topic (Tsao 1987d), its function is then like that of de alone, i.e. marking the preceding verb-patient phrase as a topic. According to Professor Chauncey Chu (personal communication), the reduplicated part is not part of the basic topic structure, because both children and second language learners acquire the use much later.

⁷The topic structure in (6.29) is suggested by Professor Chauncey Chu (personal communication).

⁸The sentence in (6.30b) can also mean "he is the person who bought a book/books yesterday," which is not a cleft interpretation.

⁹To be coded as a comment, Vps, and NPs and PPs that usually appear after the verb, e.g. duration, occurrence, and goal, do not need shi, because their position at the end of the sentence already marks them as comment (6n.2a). To be coded as a topic, NPs and PPs that usually appear before the verb do not need de, because their earlier position already marks them as topic (6n.2b).

(6n.2) a.?Ta zuotian zou shi yi ci.
he yesterday walk SHI one time

"It was once that he walked yesterday."

b.*Ta de zuotian mai shu.
he DE yesterday buy book

CHAPTER VII

WORD ORDER AND INTERCLAUSAL COHESION

This chapter will examine the function of word order for cohesion between adjacent clauses in the larger discourse unit, i.e. a topic chain or a sentence group. A topic chain may be a compound sentence or a complex sentence. Section 7.1 looks at the general question of textual cohesion. Section 7.2 introduces word order as a cohesive device in Mandarin Chinese. Section 7.3 examines compound and complex sentences. Section 7.4 examines sentence groups. Section 7.5 summarizes the chapter.

7.1 Textual Cohesion

7.1.1 Organization of Text

The native speakers of a language can not only judge whether a sequence of speech or writing is a grammatical sentence or clause, but can also tell whether a sequence of speech or writing is an acceptable text, and can "segment any text that consists of more than one text-sentence into its component text-sentences" (Lyons 1977:623). The ability for such judgement and segmentation comes from the native speakers' familiarity with discourse strategies as well as their linguistic knowledge. A text should not only be grammatical, with its component sentences or clauses

conforming to the formal syntactic rules in the language, it should also be cohesive. A text is cohesive if its component clauses are connected in a smooth way. Next we will first briefly review the way a text is organized.

A text is composed of paragraphs, which are then made up of topic chains. The term "topic chain" is based on discourse rather than formal punctuation. It has been defined as a group of clauses that are about the same topic that is only lexicalized in the first clause (Li and Thompson 1981:659; Tsao 1987c, 1988; Li 1985; Shi 1989).¹ We will also see that the topic of the chain can also be pronominalized in the latter clauses (Tsao 1988:263) and that it does not necessarily occur in the initial position of the first clause (Li and Thompson 1981:659; Shi 1989).

A topic chain is composed of one or more clauses. Since it is difficult to define the boundaries between sentences in Mandarin Chinese, the term "sentence" is used here only to refer to the group of clauses which is often ended by a period in written language. A clause in a topic chain may be one of the topic structures described in Chapter VI.

A topic chain may be a compound sentence with two clauses juxtaposed together without any conjunction, as illustrated in (7.1).²

- (7.1) Li Si zou le san tian, — lai le.
walk LE three day come LE

"Li Si walked for three days, and (he) came."

The sentence in (7.1) is a compound sentence, where the two clauses share the same topic Li Si. The topic for the whole topic chain, e.g. Li Si in (7.1), is called "chain topic" (Shi 1989). As seen in (7.1), the chain topic in such compound sentences may be suppressed in the following clause.

A topic chain may also be a complex sentence in which the clauses are explicitly connected (7.2). The connecting device may be an adverb like jiu "then" in the second clause (7.2a), a conjunction like suoyi "so" in the second clause (7.2b), a pair of correlative adverbs as yi "once" and jiu "then" in separate clauses (7.2c), a conjunction like yinwei "because" and one adverb like jiu "then" in separate clauses (7.2d), a pair of conjunctions like yinwei "because" and suoyi "therefore" in separate clauses (7.2e), or a connecting phrase like dang...shihou "at the time when" in the first clause (7.2f).

- (7.2) a. Li Si zhaodao le Zhang San, ____ jiu lai le.
find LE then come LE

"Li Si found Zhang San, then (Li Si or Zhang San) came."

- b. Li Si zhaodao le Zhang San, suoyi ____ lai le.
find LE so come LE

"Li Si found Zhang San, so (Li Si or Zhang San) came."

- c. Li Si yi zhaodao le Zhang San, ____ jiu
once find LE then

lai le.
come LE

"As soon as Li Si found Zhang San, (Li Si or Zhang San) came."

- d. Yinwei Li Si zhaodao le Zhang San, ____ jiu
 because find LE then
 lai le.
 come LE

"Because Li Si found Zhang San, he (Li Si or Zhang San) came."

- e. Yinwei Li Si zhaodao le Zhang San, suoyi ____
 because find LE so
 lai le.
 come LE

"Because Li Si found Zhang San, he (Li Si or Zhang San) came."

- f. Dang Li Si zhaodao Zhang San de shihou, ____
 at find MOD time
 lai le.
 come LE

"As Li Si found Zhang San, he (Li Si or Zhang San) came."

In the topic chains of (7.1), the chain topic, which both clauses comment on, can be either Li Si or Zhang San mentioned in the first clause, depending on the context. In (7.2a), for instance, the suppressed argument and primary topic in the second clause can refer back to either the agent NP Li Si or, less likely, the patient Zhang San.

7.1.2 Topic Continuity

A text is linked as a cohesive whole through various linguistic devices. Stress and intonation is used to achieve cohesion in speech (Gunter 1987). Lexical cohesion refers to

the use of semantically related words and phrases to achieve cohesion (Matsumura 1987).³ Grammatical cohesion includes the use of conjunctions, adverbials, tense-aspect markers, punctuation, and word order.⁴

The topic in a text may remain the same or change, depending on the speaker's need (Brown and Yule 1985). Topic continuity is low if the topic is changed too frequently, whereas topic continuity would be high if the topic does not change at all. A compromise is achieved between the speaker/writer and listener/reader through various devices available to facilitate the topic change without breaking down topic continuity. Brown and Yule (1985) discuss the process in which both sides in communication negotiate the topic change.⁵

The word order of component clauses in a topic chain or a sentence group influences topic continuity in a text. In Chinese, as the clause topic is consistently related to word order, topic continuity may be maintained through word order, in addition to other cohesive devices, in the individual clauses of a topic chain. Li and Thompson (1981:100ff) illustrate how the topic at the beginning of a clause relates the clause to the preceding discourse by picking up the same topic, introducing a slightly different subtopic, or reintroducing a topic which has been dropped. Tsao (1987c:18) also points out that the corresponding topic

position in different clauses may have the function of making a contrast between the two clause topics.

7.2 Word Order and Topic Continuity

Word order has long been recognized as a cohesive device (Halliday & Hasan 1976:303; Longacre 1983:xvii). In this section we will see how word order functions as a cohesive device in English and Chinese.

7.2.1 Word Order in English

Brown and Yule (1985:128) cite two paragraphs that Halliday had used in a lecture to show how word order functions as one important cohesive device in English (7.3). The paragraph in (7.3a) is less cohesive than that in (7.3b).

- (7.3) a. It's the sun that's shining, the day that's perfect. The astronauts come here. The Great Hall they're just passing; he'll perhaps come out to greet them, the President. No, it's the ceremony that the admiral's taking...
- b. The sun is shining, it's a perfect day. Here come the astronauts. They are just passing the Great Hall; perhaps the President will come out to greet them. No, it's the admiral who's taking the ceremony...

As Brown and Yule (1985:129) comment, "it is hard for the processor to construct a coherent model of what is going on from the text" in (7.3a). The paragraph in (7.3b), however, is more acceptable since it is more cohesive. One of the factors affecting appropriateness of the two paragraphs in

(7.3a) and (7.3b) is the word order in the component clauses making up the paragraphs.

The paragraph in (7.3a) changes the topic, as well as focus, of the component clauses too frequently. The very first sentence focuses on the sun and the day as more rhematic elements, while assuming the reader already knows something is "shining" and "perfect." The next sentence places the astronauts at the beginning as a more important topic. But the following sentence of topicalization codes the Great Hall as more topical than they. The next sentence codes he'll perhaps come out to greet them as more topical than the President, which is coded as a focused comment.⁶ The following cleft sentence is supposed to argue against the previous sentence. But the ceremony, instead of the admiral, is contrasted with the President in previous discourse. At the same time, the other NP the admiral, which is supposed to be new information, is signaled as part of old information.

The paragraph in (7.3b) maintains cohesion better by changing the topics of the clauses gradually. First the weather is introduced. Then the astronauts are led into the scene by an inverted sentence, which places here first to connect the sentence to the previous description of the weather. The following sentence picks up the astronauts, already introduced into discourse in the previous sentence, as the clause topic. Then they, referring back to the

astronauts, helps to introduce the Great Hall, which naturally relates to the President in the following sentence. The last cleft sentence in (7.3b) negates the comment of the preceding sentence, i.e. the President, by focusing on the new information the admiral.

7.2.2 Word Order in Chinese

It has been realized that Chinese codes topic more consistently in clause initial position, hence the title of topic-prominent language (Chao 1968; Chu 1979a; Li and Thompson 1981; Zhang 1982:257). Lii (1975) clearly states that word order in Chinese is determined by the sentence functional perspective, i.e. the theme starts at the beginning of the sentence and fades away as the sentence goes on, while the rheme (including focus) intensifies as the theme fades away and culminates at the end of the sentence (cf. Chapter V).

Let us see the following sentence in (7.4) (Hu et al. 1981:376).

(7.4) Yao Zhilan he Wu Tianbao, yi ge shi
and one M be

dianhua-yuan, yi ge shi huoche siji.
telephone operator one M be train engineer

"Yao Zhilan and Wu Tianbao, one is a telephone operator, the other is a train engineer."

In (7.4), the names of the two important characters in a story are placed at the beginning of the sentence, with yi

ge "one" as a pronoun in each clause to corefer with each of them. It was suggested (Hu et al. 1981:377) that the noun phrase Yao Zhilan he Wu Tianbao "Yao Zhilan and Wu Tianbao," appears at the beginning of the sentence in order to become more prominent, or to avoid a long complement after the verb. If we relate prominence to cohesion in higher discourse units, then the leftmost element is regarded as a more prominent topic with respect to discourse.

What is coded as the clause topic and thus takes an earlier position is largely dependent on the context of the utterance. Linguistic contexts, as well as extralinguistic contexts, are therefore significant in determining the word order inside the individual clauses or sentences. Chu (1984a:133) and Zubin and Li (1986:298) all use context as one factor in determining the word order in the individual clauses. For instance, contextual factors may influence the choice between the preverbal and postverbal positions of a patient or agent NP.

7.3 Word Order in Topic Chains

The chain topic is what appears in the first clause and is picked up as the primary topic in the latter clauses. This section looks at the topic chains in which the clauses are connected through the different devices shown in (7.1-2). We will look at the topic chains in which the first clause has the order of agent-verb-patient in Section 7.3.1, those in which the first clause is a ba-structure in Section

7.3.2, and those in which the first clause has the order of NP-V-NP in Section 7.3.3. Some other types of topic chains will be examined in Section 7.3.4. We will show that the elements in different positions in the first clause may have different priority in becoming the chain topic, and that the topic structures of individual clauses are related to the interpretation of the topic in the higher discourse unit.

7.3.1 NP-V-NP in First Clause

The typical order of NP-V-NP has a preverbal agent and a postverbal patient. The chain topic may be suppressed in the second clause, as shown in (7.5), where (7.5b-g) are the same as (7.2). In all the sentences in (7.5), the zero pronoun in the second clause can refer to either the agent NP Li Si, or the patient NP Zhang San, depending on the context.⁷

- (7.5) a. Li Si zhaodao le Zhang San, ____ lai le.
 find LE come LE

"Li Si found Zhang San, (Li Si or Zhang San) came."

- b. Li Si zhaodao le Zhang San, ____ jiu lai le.
 find LE then come LE

"Li Si found Zhang San, then (Li Si or Zhang San) came."

- c. Li Si zhaodao le Zhang San, suoyi ____ lai le.
 find LE so come LE

"Li Si found Zhang San, so (Li Si or Zhang San) came."

- d. Li Si yi zhaodao le Zhang San, ____ jiu
once find LE then

lai le.
come LE

"As soon as Li Si found Zhang San, (Li Si or Zhang San) came."

- e. Yinwei Li Si zhaodao le Zhang San, ____ jiu
because find LE then

lai le.
come LE

"Because Li Si found Zhang San, he (Li Si or Zhang San) came."

- f. Yinwei Li Si zhaodao le Zhang San, suoyi ____
because find LE so

lai le.
come LE

"Because Li Si found Zhang San, he (Li Si or Zhang San) came."

- g. Dang Li Si zhaodao Zhang San de shihou, ____
at find MOD time

lai le.
come LE

"As Li Si found Zhang San, he (Li Si or Zhang San) came."

In (7.5), no phrase is separated from the rest of the topic chain by a clause conjunction. But when a noun phrase appears in front of a clause conjunction, that phrase must be interpreted as the chain topic. Let us examine (7.6).

- (7.6) a. Li Si yinwei zhaodao le Zhang San,
because find LE

____ jiu lai le.
then come LE

"Because Li Si found Zhang San, so he (Li Si) came."

- b. Li Si yinwei zhaodao le Zhang San,
because find LE

suoyi — lai le.
so come LE

"Because Li Si found Zhang San, so he (Li Si) came."

- c. Li Si dang zhaodao Zhang San de shihou,
at find MOD time

— lai le.
come LE

"As Li Si found Zhang San, he (Li Si) came."

As seen in (7.6), the phrase appearing before the conjunctions, e.g. yinwei "because" in (7.6a-b), and dang "at (the time)" in (7.6c), is always interpreted as the chain topic. In all the three sentences in (7.6), the chain topic can only be the NP Li Si which precedes the conjunction. This supports Tsao's (1987c) suggestion that the position in front of the conjunction is the position for the chain topic.

When a coreferential pronoun, e.g. ta, is used in the second clause, the interpretation of the chain topic may be different for some sentences. Look at the sentences in (7.7).

- (7.7) a. Li Si zhaodao le Zhang San, ta lai le.
find LE he come LE

"Li Si found Zhang San, he (Li Si, Zhang San or someone else or someone else) came."

- b. Li Si zhaodao le Zhang San, ta jiu lai le.
find LE he then come LE

"Li Si found Zhang San, then he (Li Si, Zhang San, or someone else) came."

- c. Li Si zhaodao le Zhang San, suoyi ta
find LE therefore he

lai le.
come LE

"Li Si found Zhang San, therefore he (Li Si or Zhang San, or someone else) came."

- d. Li Si yi zhaodao le Zhang San, ta jiu
once find LE he then

lai le.
come LE

"As soon as Li Si found Zhang San, he (Li Si, Zhang San, or someone else) came."

- e. Yinwei Li Si zhaodao le Zhang San, suoyi ta
because find LE so he

lai le.
come LE

"Because Li Si found Zhang San, he (Li Si, Zhang San, or someone else) came."

- f. Yinwei Li Si zhaodao le Zhang San, ta jiu
because find LE he then

lai le.
come LE

"Because Li Si found Zhang San, he (Li Si, Zhang San, or someone else) came."

- g. Dang Li Si zhaodao Zhang San de shihou,
at find MOD time

ta lai le.
he come LE

"As Li Si looked for Zhang San, he (Li Si, Zhang San, or someone else) came."

In (7.7), the pronoun ta "he" in the second clause can not only refer back to Li Si or Zhang San, similar to the zero pronoun in (7.4), but can also refer to some other person not mentioned in the first clause. In the latter case, since no topics are shared by the two clauses, the whole sentence then cannot be regarded as a topic chain. The reference of the pronoun depends on the context.

But the presence of ta has no effect on the sentences where an element appears in front of the conjunction, as shown in (7.8). The topic interpretation in (7.8) is the same as in (7.6) in that only be the NP before the conjunction, i.e. Li Si, can be interpreted as the chain topic. Any other interpretation would be unacceptable.

- (7.8) a. Li Si yinwei zhaodao le Zhang San, ta jiu
 because find LE he then

lai le.
 come LE

"Because Li Si found Zhang San, so he (Li Si) came."

- b. Li Si yinwei zhaodao le Zhang San, suoyi ta
 because find LE so he

lai le.
 come LE

"Because Li Si found Zhang San, so he (Li Si) came."

- c. Li Si dang zhaodao Zhang San de shihou, ta
 at find MOD time he

lai le.
 come LE

"As Li Si found Zhang San, he (Li Si) came."

The discussion of the topic chains with the first clause in the NP-V-NP order has shown the following: (1) when no element from the first clause is placed in front of a conjunction, any NP can be the primary topic of the second clause and hence the chain topic; (2) when one NP is placed before a conjunction in the first clause, that element must be coded as the chain topic; (3) the pronoun in the second clause may refer to the chain topic, or to some other element not mentioned in the first clause.

7.3.2 Ba in First Clause

In a ba-sentence, the patient NP is placed in front of the secondary topic marked by ba, which is usually the agent. Now let us see if it makes any difference when the first clause is a ba-sentence (7.9).

- (7.9) a. Li Si ba Zhang San zhaodao le, ____ lai le.
 BA find LE come LE

"Li Si found Zhang San, and (Li Si or Zhang San) came."

- b. Li Si ba Zhang San zhaodao le, ____ jiu
 BA find LE then

lai le.
 come LE

"Li Si found Zhang San, and (Li Si or Zhang San) came."

- c. Li Si yi ba Zhang San zhaodao le, ____ jiu
 once BA find LE then

lai le.
 come LE

"As soon as Li Si found Zhang San, (Li Si or Zhang San) came."

- d. Li Si ba Zhang San zhaodao le, suoyi
BA find LE so

— lai le.
come LE

"Li Si found Zhang San, (Li Si or Zhang San) came."

- e. Yinwei Li Si ba Zhang San zhaodao le, — jiu
because BA find LE then

lai le.
come LE

"Because Li Si found Zhang San, then (Li Si or Zhang San) came."

- f. Yinwei Li Si ba Zhang San zhaodao le, suoyi
because BA find LE so

lai le.
come LE

"Because Li Si found Zhang San, so (Li Si or Zhang San) came."

- g. Dang Li Si ba Zhang San zhaodao de shihou,
at BA find DE time

— lai le.
come LE

"As Li Si found Zhang San, (Li Si or Zhang San) came."

As shown in (7.9), the use of the ba-sentence in the first clause does not affect the interpretation of the chain topic: either the primary topic Li Si or the secondary topic Zhang San can be the topic of the topic chain, which is similar to (7.5) where the first clauses have the NP-V-NP order. The use of the ba-sentence in the first clause then

does not affect the selection between the agent or patient as the chain topic, since the phrase marked by ba is not more likely to become the chain topic than the primary topic NP in the initial position.

But the ba-sentence would affect the topic interpretation of some other topic chains, as shown in (7.10).⁸

- (7.10) a. Ta ba shujia baiman le shu, — jiu
he BA bookshelf cover LE book — then

haokan duo le.
tidy much LE

"When he covered the bookshelf with books,
(the bookshelf) looked much better."

- b. Ta ba shu baiman le shujia, — jiu zhengqi
he Ba book place LE bookshelf then tidy

duo le.
much LE

"When he placed the books all over the
bookshelf, (the books) looked much tidier."

In (7.10), the ba-phrase is more likely to be the chain topic than the NP after the verb. As Tsao (1987a:23-24) points out, because ba in the first clause marks different secondary topics in the two sentences in (7.10a) and (7.10b), the sentences have different chain topics. In (7.10a), the NP shujia "bookshelf" is marked by ba as the secondary topic and it is also the chain topic. In (7.10b), the NP shu "books" is marked by ba as the secondary topic and again it is the chain topic.

The observation that the ba-phrase wins over the NP after the verb in becoming the chain topic (7.10) does not contradict the observation in (7.9) that both the primary topic and the ba-phrase can be the chain topic. Here is an example in (7.11).

- (7.11) Ta ba shujia baiman le shu, — jiu zou le.
 he BA bookshelf place LE book then leave LE

"He placed the books all over the bookshelf,
 then (he) left."

Since ta "he" in the first clause is compatible in meaning with the verb phrase zou le "left" in the second clause, it has priority over shujia "bookshelf" to be the chain topic.

As in the topic chains with the first clause in the NP-V-NP order, the placement of an element before the conjunction would require that element to be the chain topic. One example is shown in (7.12).

- (7.12) Li Si yinwei ba Zhang San zhaodao le, — jiu
 because BA find LE then
 lai le.
 come LE

"Because Li Si found Zhang San, then (Li Si) came."

Similar to the sentences with the NP-V-NP order in the first clause in (7.7), a pronoun that appears in the second clause may also refer to an entity that is not mentioned in the first clause with ba, as shown in (7.13a) and (7.13b). Similar to (7.8), the phrase in front of the conjunction

must also be interpreted as the chain topic, as shown in (7.13c).

- (7.13) a. Li Si ba Zhang San zhaodao le, ta jiu
BA find LE he then

lai le.
come LE

"Li Si found Zhang San, he (Li Si, Zhang San, or someone else) came."

- b. Dang Li Si ba Zhang San zhaodao de shihou,
at BA find MOD time

ta lai le.
he come LE

"As Li Si found Zhang San, (Li Si, Zhang San, or someone else) came."

- c. Li Si yinwei ba Zhang San zhaodao, suoyi ta
because BA find so he

lai le.
come LE

"Because Li Si found Zhang San, he (Li Si) came."

In (7.13a), the chain topic can be either Li Si or Zhang San, whichever is coreferential with ta in the second clause. The pronoun can also refer to someone else. A similar interpretation is also seen in (7.13b), where ta can refer either to Li Si or Zhang San, which are mentioned in the first clause, or to someone else who is not mentioned in the first clause. In (7.13c), where Li Si is placed in front of the conjunction yinwei, Li Si is the only candidate for the chain topic.

7.3.3 Topicalized Structure in First Clause

Topicalization traditionally refers to the structure with the patient placed at the beginning before the agent, as shown in (7.14).

- (7.14) Na ben shu Li Si zhaodao le.
that M book find LE

"That book, Li Si found (it)."

In (7.14), the patient na ben shu "that book" is the primary topic of the clause, while the agent Li Si is the secondary topic.

Now let us examine the topic chains in which the first clause is a structure of topicalization, as in (7.15).

- (7.15) a. Zhang San Li Si zhaodao le, — lai le.
find LE come LE

"Li Si found Zhang San, and he (Zhang San) came."

- b. Zhang San Li Si zhaodao le, — jiu lai le.
find LE then come LE

"Li Si found Zhang San, and he (Zhang San) came."

- c. Zhang San Li Si zhaodao le, suoyi —
find LE so

lai le.
come LE

"Li Si found Zhang San, so he (Zhang San) came."

- d. Zhang San Li Si yi zhaodao le, — jiu
once find LE then

lai le.
come LE

"As for Zhang San, as soon as Li Si found him, (Zhang San) came."

e.*Yinwei Zhang San Li Si zhaodao le, suoyi ____
because find LE so

lai le.
come LE

"Because Zhang San Li Si found him, he (Zhang San or Zhang San) came."

f.*Yinwei Zhang San Li Si zhaodao le, ____ jiu
because find LE then

lai le.
come LE

"Because Zhang San Li Si found him, (Zhang San or Li Si) came."

g.*Dang Zhang San Li Si zhaodao le de shihou,
at seek LE MOD time

____ lai le.
come LE

"As Zhang San Li Si found him, (Zhang San or Li Si) came."

In the four topic chains in (7.15a-d), where no conjunction is used before the first clause, the NP in the initial position, i.e. the primary topic, must be the chain topic of the whole sentence. This sets the clause with topicalization apart from the NP-V-NP clause and the ba-structure, where either the primary or secondary topic can be chosen as the chain topic.

The three topic chains in (7.15e-g) each have a conjunction at the beginning of the first clause and are not acceptable. We saw in (7.15a-d) that the patient NP appearing before the agent is at the same time at the

beginning of the topic chain. The patient NPs in the initial position of the first clause of (7.15e-g), however, are not placed at the beginning of the topic chain, i.e. in front of the conjunction. It is a contradiction if an element is intended to be the chain topic, but does not take the position of the chain topic. Therefore the topic chains in (7.15e-g) are not acceptable.

There would be no contradiction if the patient NP is placed in front of the conjunction. For instance, all the three sentences in (7.16) with the patient NP Zhang San before the conjunction are fully acceptable. And in all of them, the patient Zhang San must also be interpreted as the chain topic. This once again confirms the suggestion in Tsao (1987c) that the position before the first conjunction is the position of the chain topic.

- (7.16) a. Zhang San yinwei Li Si zhaodao le, suoyi
 because find LE so

— lai le.
 come LE

"Zhang San, because Li Si found him (Zhang San), came."

- b. Zhang San yinwei Li Si zhaodao le, — jiu
 because find LE then
 lai le.
 come LE

"Zhang San, because Li Si found him (Zhang San), came."

- c. Zhang San dang Li Si zhaodao le (ta) de
 at find LE he MOD

shihou, — lai le.
time come LE

"Zhang San, as Li Si found him (Zhang San),
came."

The tendency for the patient at the beginning of the first clause to be the chain topic is so strong that even the use of ta "he" in the second clause cannot extend the topic interpretation so as to include the other entities, mentioned or not in the first clause. This is clearly seen in (7.17).

- (7.17) a. Zhang San Li Si zhaodao le, ta jiu lai le.
find LE he then come LE

"As for Zhang San, Li Si found him, he (Zhang San) came."

- b. Zhang San yinwei Li Si zhaodao le, suoyi ta
because seek LE so he
lai le.
come LE

"Because Li Si found Zhang San, so he (Zhang San) came."

The use of ta in the second clause does not change the interpretation of the chain topic in any of the sentences in (7.17). In both (7.17a) and (7.17b), the chain topic is still Zhang San, the patient NP in front of the conjunction.

In examining the three types of word order for the first clause in a topic chain, we have seen that different word order patterns in the first clause manifest different effects on the selection of the topic of the topic chain.

The NP-V-NP clause allows the possibility to interpret either noun phrase to be the chain topic, as seen in (7.5). The function of the ba-structure is to restrict the selection of the chain topic to the noun phrases before the verb, as seen in (7.10) and (7.11). The function of the topicalized structure is to further restrict the selection of the chain topic to the patient noun phrase at the beginning of the first clause, as seen in (7.15), (7.16), and (7.17).

For all the three types of topic chains, the element before the conjunction in the first clause must be the chain topic at the same time. The position before the conjunction is therefore the position for the chain topic. The pronoun appearing in the second clause may refer to an entity which may or may not have been mentioned the first clause, unless there is already an element in front of the conjunction, or the first clause has a topicalization structure.

7.3.4 Other Topic Chains

For certain sentences, the noun phrase in the modifier of the primary topic can also be the chain topic, as in (7.18).

- (7.18) a. Li Si de fugin you-qian, ____ hen gaoxing.
 POSS father rich very happy
- "Li Si's father is rich, (Li Si or his father) is very happy."
- b. Li Si de fugin you-qian, ta hen gaoxing.
 POSS father rich he very happy

"Li Si's father is rich, (Li Si, his father, or someone else) is very happy."

In (7.18a), either Li Si or Li Si de fugin "Li Si's father" can be the topic of the chain. When a pronoun ta "he" is used in (7.18b), again either Li Si, or Li Si de fugin "Li Si's father" can be the chain topic.⁹

But the possessor Li Si would not be the chain topic if there is a third NP in the first clause (7.19a), unless a pronoun is used in the second clause (7.19b).

- (7.19) a. Li Si de fugin zhaodao le Zhang San,
POSS father find LE

— hen gaoxing.
very happy

"Li Si's father found Zhang San, (Li's father or Zhang San) was happy."

- b. Li Si de fugin zhaodao le Zhang San,
POSS father find LE

ta hen gaoxing.
he very happy

"Li Si's father found Zhang San, he (Li's father, Zhang San, or someone else) was happy."

In (7.19a), it is possible for either Li Si de fugin "Li Si's father" or Zhang San to be the chain topic, but it is difficult for Li Si in the modifier to be the chain topic. When ta is used in the second clause (7.19b), it may refer to Li Si de fugin, Zhang San, or some other person, who can also be Li Si.

Longer topic chains are formed by placing three or more topic structures described in Chapter IV side by side, as shown in (7.20), where the NP in the initial position of the whole topic chain, i.e. zuo zai zuomian de nei ge zuojia "the writer who is sitting on the left side," is the chain topic (Shi 1989:241).

- (7.20) a. Zuo zai zuomian de nei ge zuojia,
sit at left-side MOD that M writer

wo kan guo ta xie de shu,
I read EXP he write MOD book

- b. Li Si dui ta hen gan xingqu,
towards him very have interest

- c. Wang Wu wuyuanwugu de yidian bu
with no reason MOD at all not

xihuan ____.
like

"As for the writer who is sitting on the left side, I have read many books he wrote, (and) Li Si is very interested in him, (but) Wang Wu does not like (him) a bit for no reason at all."

As Shi (1989:241) claims, the position of the chain topic in the component clauses is at the beginning of the clauses, not in the position of the resumptive pronoun ta or the zero anaphor indicated by ____.

Shi's claim is supported by the fact that the chain topic, i.e. zuo zai zuomian de nei ge zuojia "the writer who is sitting on the left side," can appear at the beginning of each clause without changing the interpretation of each, though resulting in separate topic chains containing only

one clause (7.21). In (7.21a), the resumptive pronoun ta is used in the comment because the topic is an argument inside the modifier of the noun phrase ta xie de shu "books that he wrote." The resumptive pronoun is also needed in (7.21b), where the topic is the argument of a preposition. In (7.21c), the noun phrase coreferential with the topic is suppressed in the comment part, since it is the patient of the verb xihuan "like."

- (7.21) a. Zuo zai zuomian de nei ge zuojia,
sit at left-side MOD that M writer

wo kan guo ta xie de shu.
I read EXP he write MOD book

"As for the writer who is sitting on the left side, I have read the books he wrote."

- b. Zuo zai zuomian de nei ge zuojia,
sit at left-side MOD that M writer

Li Si dui ta hen gan xingqu.
towards him very have interest

"As for the writer who is sitting on the left side, Li Si is very interested in him."

- c. Zuo zai zuomian de nei ge zuojia,
sit at left-side MOD that M writer

Wang Wu wuyuanwugu de yidian bu xihuan
with no reason MOD a bit not like
—.

"As for the writer who is sitting on the left side, Wang Wu does not like (him) a bit for no reason at all."

Several things are worth noticing in the description of various topic chains. First, the chain topic can appear in different positions in the first clause. Second, the

secondary topic marked by ba in the first clause is more likely to be the chain topic than the postverbal noun phrase. Third, the patient noun phrase coded as the primary topic in the first clause by "topicalization" is usually interpreted as the chain topic, whether it is suppressed or pronominalized in the following clause(s).

7.4 Word Order in Sentence Groups

The effect of word order can also be seen among sentences in a paragraph. Although the individual components are sentences, demarcated by punctuation in writing, their word order is still sensitive to the coding of the higher topic.

7.4.1 Sentences Forming a Topic Chain

First let us look at sentence groups with the same topic, which may be regarded as topic chains in a broader sense. The effect of word order can be illustrated by the two paragraphs in (7.22) and (7.23). which differ in the word order of the second sentence. The paragraph in (7.22) is judged as more cohesive than (7.23) in Huang and Liao (1985:449).

- (7.22) a. Zai shengchan dui li, ta shi youmingde
at production team in, she be famous

laodong daitou ren.
work leading person

- b. Qunian ta bei guangda sheyuan xuan
last.year she AGT broad commune.member elect

wei laodong mofan.
as work model

- c. Jinnian ta you zuo-chu le xin chengji.
this year she again make LE new results

"She is a leading worker in the production team. Last year she was elected model worker by the broad masses of commune members. This year, she has again made new contributions."

- (7.23) a. (Same as 7.22a)

- b. Qunian guangda sheyuan xuan ta
last.year broad commune.member elect her

wei laodong mofan.
as work model

- c. (Same as 7.22c)

Both (7.22) and (7.23) have ta "she" as their topic. Both paragraphs use the same structure for the first and last sentence. The difference between the two lies in the second sentence. In (7.22b), ta "she" is coded as a higher topic than guangda sheyuan "broad masses of commune members," and both lexical cohesion (with ta referring to the ta in the previous clause) and word order combine to maintain cohesion in the paragraph. In (7.23b), however, the noun phrase guangda sheyuan "broad masses of commune members" is coded as more topical than the NP ta "she." That is, (7.23b) relies on lexical cohesion alone, without using word order at the same time, to achieve cohesion in larger discourse unit. As (7.23b) employs fewer cohesive ties, its paragraph is less cohesive than (7.22).

7.4.2 Sentences Linked by Topic Chains

The paragraph in (7.24) shows how the topics of the individual clauses change in the description of an excavation (Hu et al. 1981:531).

- (7.24) a. Sui wa paoguang le, shi yi dui xin
 broken tile dig-clean LE be one pile new
tu;
 earth
- b. xin tu chuqing le, shi yi kuai muban;
 new earth out-clear LE be one M board
- c. muban jie qilai, shi yi ge da wagan;
 board uncover up be one M big earthen jar
- d. ba gang shang de daocao nadio yihou,
 BA jar top DE straw take-away after
 yuan shi manman de yi gang bai mi.
 originally be full DE one-jar white rice

"After the broken tiles were dug up completely, there was a pile of new earth; after the new earth was taken out, there was a board; when the board was uncovered, there was a big earthen jar; with the straws on the earthen jar taken away, finally there was a full jar of white rice."

Each sentence in (7.24) is itself made up of two clauses indicating two succeeding actions or states. Although the primary topic of each sentence is different from that of the preceding sentence, the sentences in (7.24) still form a cohesive text. What links (7.24a) to (7.24b), and (7.24b) to (7.24c) is the topic chain formed between each pair of consecutive sentences. For instance, the sentence in (7.24a) codes sui wa "broken tiles" as the primary topic, while introducing xintu "new earth" as a new

entity in the discourse. Then in (7.24b), xin tu "new earth" is picked up as the primary topic. Thus the second clause in (7.24a) and the first clause in (7.24b) form a topic chain. Similarly, the entity yi kuai muban "a wooden board" newly introduced in (7.24b) is coded as the primary topic in (7.24c). The sentence in (7.24c) and (7.24d) are not linked through topic chains. The two are linked through the semantic relation between yi ge da wagang "a big earthen jar" in the second clause of (7.24c) and wa gang shang de daocao "straws on the earthen jar" in the first clause of (7.24d).

7.5 Summary

We have shown that word order, which codes the topic structures in the individual clauses, is an effective device in maintaining textual cohesion in larger discourse units in Chinese. In a topic chain, the use of different word order patterns in the first clause is relevant to the interpretation of the chain topic. While an element in many different positions in an NP-V-NP sentence, e.g. initial, preverbal, postverbal, and modifier, can be selected as the chain topic, the use of the ba-sentence can limit the selection of the chain topic to the preverbal NPs. The topicalized sentence further limits the chain topic to the initial NP. The word order of the component sentences may also affect the topic structure of the discourse unit containing those sentences. A group of sentences can be

linked together through the topic chains formed between the sentences.

Notes

¹Li (1985) analyzes text into paragraphs which are about the same topic. She then analyzes a paragraph into topic chains, and the latter into clauses. According to Li, a lexical noun phrase introduces a new topic, and thus starts a new paragraph; a pronoun marks the beginning of a topic chain; and a zero anaphor serves as a cohesive tie between the individual clauses in a topic chain. Shi's (1989) topic chain refers to the groups of clauses not explicitly conjoined by conjunctions. His definition is similar to Li and Thompson (1981) but different from Tsao (1987c) in that the first occurrence of the topic is not necessarily placed in the initial position in the first clause.

²The later occurrences of the chain topic may be suppressed, since it is recoverable through its first occurrence in the first clause. Notice that an argument within the comment of a clause may also be suppressed, through its semantic relationship with the topic of the clause. But the two types of suppressions are different: (1) the suppression of a chain topic is at the beginning of the clause, while that of an argument may be in some other positions; (2) the suppressed topics are coreferential with the chain topic, while a suppressed argument may not be coreferential with the chain topic.

³Topic continuity is closely related to lexical cohesion, i.e. choice of lexical items to maintain cohesion. When exactly the same words or phrases are repeated, it is called reiteration (7n.a). When a pronoun is used to refer back to some other lexical items, it is pronominalization (7n.b). The second lexical item may also be related to the first item as its synonym or near synonym (7n.c), superordinate (7n.d), hyponym (7n.e), antonym (7n.f), or in some other relations (7n.g).

- (7n) a. Ta xihuan sanmingzhi. Wo bu xihuan sanmingzhi.
he like sandwich I not like sandwich

"He likes sandwiches. I do not like sandwiches."

- b. Na wei jiaoshou lai le. Ta jiao luoji.
that M professor come LE he teach logic

"That professor has come. He teaches logic."

- c. Zhege haizi hen you-yisi; women dou xihuan
this child very funny we all like

zhege xiao jiahuo.
this little fellow

"This child is very funny; we all like the little fellow."

- d. Wo mai le piji, yinwei ta ai he jiu.
I buy LE beer because he like drink alcohol

"I bought some beer, because he likes to drink."

- e. Xuesheng dou lai le. Xue lishi de zui duo.
student all come LE study history most many

"The students have all come. More (among them) study history."

- f. Pengyou bu xian duo. Diren bu xian shao.
friend not mind many enemy not mind few

"As to friends (one does) not care if (they are) many. As to enemies, (one does) not care if (they are) few."

- g. Lu shang ren duo, che guo-bu-qu.
road on person many car pass-not-go

"There were many people on the road, the car could not go through."

As Matsumura's (1987) study shows, in a Chinese text, a sentence has at least one element that is semantically relevant to another element in the preceding sentence. It may be due to this overwhelming lexical cohesion that Wang (1987) suggests that the semantic relevance is the only cohesive device in Chinese.

⁴Chang (1986) illustrates how the absence of the final particle le helps to connect different parts in discourse and how the use of the same particle marks the peak of a paragraph. Conjunctions and adverbials are used to join clauses together (Li and Thompson 1981).

⁵Five ways of shifting clause "themes" are mentioned in Keul (1979:189-199): (1) linear progression, which is a kind

of complete reiteration; (2) continuous progression, which is pronominalization; (3) derived theme, which is the use of semantically related items; (4) splitting, which is the use of hyponyms; and (5) thematic jump, which makes use of some semantically related items.

⁶It is also possible to regard "he'll come out to greet them, the President" as an afterthought sentence, especially when the pause is very short between "the President" and the preceding part, and "the President" receives less stress.

⁷Both Lyu and Zhu (1978:172) and Tsao (1987c) agree that the noun phrase after dang in a dang...shihou clause can be suppressed in the second clause.

⁸The two examples are taken from Tsao (1987a:23-24).

⁹As in (7.7), the clauses would not form a topic chain if ta refers to someone else.

CHAPTER VIII

TEXTUAL ANALYSIS OF WORD ORDER

This chapter will examine actual written texts to further test the correlation between word order and topic continuity. Section 8.1 is an introduction to the theoretical basis of the statistical analysis pursued in this chapter. Section 8.2 illustrates the methodology and data that this study uses. Section 8.3 illustrates the types of clauses surveyed in this study. Section 8.4 discusses the results of the survey. And Section 8.5 is a summary.

8.1 Topic Continuity

The term "topic continuity" is defined as the degree of accessibility to the reader of a referent in text (Givon 1983:7). The easier it is for the reader to retrieve the reference of the lexical item, the more topical the item is. If an item is more topical, then we say that the item has more topic continuity. Topic continuity is different from thematic continuity, which refers to the overall organization of presentation of the passage (Givon 1983:8).

Topic continuity is more concrete and can be statistically described. As Givon and many others in Givon (1983) show, the topic continuity of a referent can be measured in terms of how long the referent has been absent

from the previous text and how long it will be continuously referred to in the following text. The former is called "referential distance" and the latter "persistence."

We will test how the position of an NP in the component clauses of a text is related to its topic continuity in terms of its referential distance with respect to the preceding text, and its persistence with respect to the following text. Another notion, "referential interference," which aims at measuring the contrast function, will not be tested in this study.

As word order in Chinese plays an important role in coding topic at the clause level, it is expected that word order also codes topic continuity at the level of discourse. That is, the position of an lexical item, as well as its phonological size, may present the element as more or less accessible to the reader.¹ However, it would be misleading if word order and phonological size were weighed on the same scale, as Givon does in (1983:17), where stressed pronouns are said to be more continuous than right-dislocation. The reason is that phonological size and word order are two separate dimensions. For instance, the phrases of different sizes, e.g. a full noun, a pronoun, etc., may appear in the same position, and the phrases of the same phonological size may also appear in different positions. Therefore, following Sun and Givon (1985), word order is treated here as a

dimension different from phonological size so that the effects of word order can be more clearly seen.

8.2 Data and Methodology

Five narrative articles, totaling about 5,000 Chinese characters, were chosen from the overseas edition of the People's Daily, a newspaper published in China.² They contain about 350 clauses. The articles, which were written by different authors, have similar styles and each depicts one individual person in contemporary Chinese society. The results from this survey may be different from the study of other styles of writing, for instance, exploratory or fiction. One reason for choosing such narrative articles is that they only depict one single person as the most topical entity, and that the topicality of the referents is thus easier to measure. Another reason is that the articles are short, and therefore the clauses are easier to count. It is hoped that what is true of narrative may also be true to a certain extent of other styles of writing.

This study will use the two measurements proposed by Givon (1983), referential distance and persistence. Referential distance is calculated as the number of clauses between the current noun phrase and the last appearance of its referent in the previous text. Following Sun and Givon (1985), the maximum number is arbitrarily put at 20 and any distance longer than 20 clauses is assigned 20. Persistence is represented as the number of clauses in the following

text that all refer to the topic entity indicated by the current noun phrase.

The example in (8.1) illustrates the measurements.

- (8.1) a. Jin Jialin ye shi yi ge xiangdang zhi'ao-de
Jin Jialin also be a M rather stubborn

ren,
person

- b. — yi-jiu-wu-qi nian cong Beijing Shifan
1957 year from Beijing Normal

Zhuanke-xuexiao biye hou,
School graduate after

- c. ta jiu yizhi dang jiaoshi,
he just always be teacher

- d. — zhu jiao yinyue he meishu.
chiefly teach music and fine arts

"Jin Jialin also is a rather stubborn man. Ever since graduating from Beijing Normal School, he has been teaching all the time. He is in charge of teaching music and fine arts."

In (8.1a), the value of referential distance for Jin Jialin is 20, since it now appears for the first time in the story. Its persistence is 3, since it is referred to in the next three clauses, by the zero-anaphor in (8.1b) and (8.1d), and by the pronoun ta "he" in (8.1c). The noun phrase yi ge xiangdang zhi'ao de ren "a rather stubborn man" is nonreferential and therefore has the maximum 20 for referential distance, and its persistence is 0. In (8.1b), the zero-anaphor has 1 for its referential distance and 2 for persistence. The noun phrase in the preposition phrase, Beijing Shifan Zhuanke-Xuexiao "Beijing Normal School" has

20 for referential distance and 0 for persistence. In (8.1c), ta "he" has 1 for referential distance and 1 for persistence. The other noun phrase, jiaoshi "teacher" is nonreferential, and is assigned 20 for referential distance, and it also has 0 persistence. In (8.1d), the zero anaphor has 1 for referential distance since it was mentioned in the previous clause, and has 0 persistence, provided the text ends with the clause. The other noun phrase, yinyue he meishu "music and fine arts" is nonreferential and thus is assigned 20 for referential distance and 0 for persistence.

In calculation, the number of subject clauses, object clauses including quotations, relative clauses, and the clauses further embedded in them, is not counted. The noun phrases within those clauses are not measured. One reason for such exclusion is that in this study those clauses are treated as part of simple sentences, not as immediate component clauses of topic chains. Therefore, as embedded noun phrases or adjectival phrases, their word order is not directly affected by the structure of the topic chain. The clauses containing an object clause are grouped with the clauses with no postverbal noun phrases. But the structures with two verb phrases are treated as two clauses. Although the temporal NPs, e.g. yi-jiu-wu-qi nian "the year 1957" in (8.1b), are definite and can be clause topics, they are not counted because they are always mentioned once, thus showing maximal referential distance and zero persistence. All the

other NPs, including those after a preposition, are calculated.

8.3 Clause Types Surveyed

The study classifies word order patterns into four types: clauses with one preverbal noun phrase which is not the patient, with or without an embedded object clause, i.e. NP-V-(S); clauses with one noun phrase on each side of the verb, i.e. NP-V-NP; clauses with the patient placed at the beginning, i.e. NP-(NP)-V; and clauses with a prepositional phrase between the initial noun phrase and the verb, i.e. NP-PP-V. Then the topicality of individual noun phrases or prepositional phrases is compared in terms of their different positions of the same clause and in terms of different clause types in which they appear.

Clauses with one preverbal noun phrase are illustrated in (8.2).

(8.2) ... er ta ye zhende lao qilai le.
and he also really old begin LE

"... and he is really becoming older."

Also included in this group are the clauses with a quotation or other object clauses.

Clauses with one noun phrase on each side of the verb are illustrated in (8.3).

(8.3) Ta you ziji de mengxiang....
he have self MOD dream

"He has his own dream...."

Clauses with the patient NP placed at the beginning are illustrated in (8.4).

- (8.4) Jin Laoshi de ke, yiban dou anpai zai
 Jin Teacher MOD class usually all schedule at
 wanshang he xingqitian,...
 evening and Sunday

"Mr. Jin's classes are usually scheduled in the evenings and on Sundays."

Finally are clauses with a preposition phrase between the initial noun phrase and the verb. The preposition can be ba, bei, gei "for," gei "to," dui "towards," etc., those with ba and bei are shown in (8.5).

- (8.5) a. ta manheng-de ba tiwenbiao shuai dao di
 he rudely BA thermometer throw to floor
 shang
 on

"He rudely threw the thermometer to the floor."

- b. zheli bei renmen cheng wei "tanhuan bingfang"
 here BEI people call as paralyzed ward

"People call this place 'Paralyzed Wards'."

8.4 Results and Discussion

8.4.1 NP-V or NP-V-S

The mean values of the referential distance and persistence for the noun phrases in the intransitive clauses with one preverbal noun phrase and the transitive clauses

with an object clause after the verb are illustrated in Table 8.1. The verbs in the clauses illustrated in Table 8.1 either do not take any NP after them, or take an object clause, as shown in the first and second rows respectively. The NPs surveyed in those clauses are placed in the initial position, except when preceded by an adverbial phrase.

Table 8.1. Referential Distance and Persistence for the Noun Phrases in Clauses with One Noun Phrase and the Clauses with an Object Clause.

<u>Clause Types</u>	<u>Num of Clauses</u>	<u>Ref. Distance</u>	<u>Persistence</u>
NP-V	25	6.36	0.20
NP-V-S	25	4.60	2.20
Total	50	5.48	1.20

Table 8.1 shows that the preverbal NPs in the clauses with an object clause have a shorter referential distance (4.60 clauses) and a longer persistence (2.20 clauses), hence enjoy a higher topic continuity, than the NPs in the clauses with no other NPs after the verb. The initial NPs in the clauses with an embedded object clause therefore show a higher topicality.

This is not surprising, considering the fact the initial NPs in the clauses with an object clause are agents, while those in the intransitive clauses are patients, locatives or other case roles. As agents are more prominent in discourse, they tend to be topics of higher discourse units, as well as clause topics. The other case roles are

less prominent in discourse, and naturally have relatively less chance to be higher topics.

8.4.2 NP-V-NP

Next let us look at the clauses with one NP on each side of the verb. The noun phrase before the verb is denoted by NP1, and the noun phrase after the verb by NP2. The results are indicated in Table 8.2. First we notice in Table 8.2 that the NPs before the verb have a higher topicality than the NPs after the verb.

Table 8.2. Referential Distance and Persistence for the Noun Phrases in Clauses with Both a Preverbal and a Postverbal Noun Phrase.

<u>NPs</u>	<u>Num. of Clauses</u>	<u>Ref. Distance</u>	<u>Persistence</u>
NP1	66	3.69	2.38
NP2	66	13.36	0.71

NP1 shows a shorter referential distance (3.69 vs. 13.36) and a longer persistence (2.38 vs. 0.71) than NP2. This difference again supports the correlation between word order and topicality in Chinese. A higher topic in the individual clauses of a text also tends to be a higher topic in the text as a whole. In contrast, the NPs after the verb are less likely than the initial NPs to be a higher topic in the text.

A comparison between Table 8.1 and Table 8.2 brings out another fact. The preverbal NPs in transitive clauses (Table

8.2) have a higher topicality than the preverbal NPs in the intransitive clauses (Table 8.1). The referential distance of the initial NPs in transitive clauses is much shorter than those in the intransitive clauses (3.69 vs. 6.36), and their persistence is much longer (2.38 vs. 0.20). This is again due to the agent status of the first NP in the transitive clauses.

By comparing Table 8.1 and Table 8.2, we also see that the topicality of the first NPs in transitive clauses is higher than the first NP in the clauses with an object clause, as manifested in their shorter referential distance (3.69 vs. 4.60) and longer persistence (2.38 vs. 2.20). The slight difference between the clauses with a postverbal NP and those with a postverbal object clause may also come from the semantic status of the initial NP, considering the fact that the verbs in the former type of clauses indicate an action, while the verbs in the latter type of clauses usually indicate saying, thinking, etc.

8.4.3 Topicalized Clauses

Now let us examine the scores for the clauses with the patient noun phrase placed at the beginning of the clause, and with or without the agent or a preposition phrase present. The referential distance and persistence of the patient, agent, and the NP in a PP are shown in Table 8.3. It is noticed in Table 8.3 that, in the sentences where both patient and agent appear, the patient in initial position

Table 8.3. Referential Distance and Persistence for the Noun Phrases in the Clauses with Patient at the Beginning.

<u>Types</u>	<u>Num</u>	<u>Ref. Distance</u>			<u>Persistence</u>		
		<u>Pat.</u>	<u>P-NP</u>	<u>Agt.</u>	<u>Pat.</u>	<u>P-NP</u>	<u>Agt.</u>
Pat.-Verb	3	11			0.67		
Pat.-PP-V	3	13.67	20		0.33	0.33	
Pat.-Agt.-V	11	9.55		2.73	0.46		2.77
Total	17	10.12			0.41		

has a longer referential distance (9.55 vs. 2.73) and a shorter persistence (0.46 vs. 2.77) than the agent. This finding contradicts the general observation that the "topicalized" patient is more topical than the agent which is placed in a relatively later position in the clause. A possible explanation is that topic continuity is not coded by word order alone. Among other things, lexical cohesion also plays an important role in topic continuity. It lies beyond the two measurements by referential distance and persistence, since those measurements are used for complete coreference, and therefore do not consider synonyms, hyponyms, and other semantic relationships.

We also see from Table 8.3 that the initial patient in the clauses with the agent shows a shorter referential distance than the patient in the clauses without an agent (9.55 vs. 11 and 13.67). The initial patients are more topical than the NPs in a preposition phrase, with a shorter

referential distance (10.12 vs. 20) and a longer average persistence (0.41 vs. 0.33).

Compared with the patient NPs after the verb in Table 8.2, the patient NPs at the beginning of the clauses have a shorter referential distance (10.12 vs. 13.36), but also show a shorter persistence (0.41 vs. 0.71). This suggests that, when placed at the beginning of the clause, the patient NP is more likely to be a topic which is picked up from the previous discourse, but is less likely to be a topic which is further carried on in the following discourse. Further study is needed on the differences between those two kinds of topics.³

8.4.4 Clauses with PPs

In order to find out how the prepositions (or case markers) differ in affecting the topicality of the complement NPs after them, now we will focus on the clauses with an initial NP and a preverbal PP. The other NPs in the clauses are ignored. The results are summarized in Table 8.4. In Table 8.4, the initial noun phrase is represented by (NP1) and the noun phrase after the preposition by (NP2).

The first thing that Table 8.4 shows is that the initial noun phrase has a much shorter average referential distance (3.06 vs. 9.17) and a longer persistence (2.72 vs. 1.56) than the noun phrase after the preposition. This supports the general principle of placing higher topics before lower topics.

Table 8.4. Referential Distance and Persistence in Clauses with a Preverbal Prepositional Phrase.

		<u>Ref. Distance</u>				<u>Persistence</u>	
		(N)	NP1	(N)	NP2	NP1	NP2
<u>ba</u>		8	3.00	8	7.28	3.13	0.88
<u>bei</u>	"by"	3	1.33	2	20.00	5.33	0.00
<u>gei</u>	"for"	9	3.33	9	2.12	0.22	2.78
<u>gei</u>	"to"	1	20.00	1	20.00	0.00	1.00
<u>dui</u>	"towards"	4	6.25	4	6.25	1.25	1.25
<u>yong</u>	"with"	2	1.00	2	20.00	4.00	0.50
<u>bi</u>	"than"	1	1.00	1	3.00	0.00	0.00
<u>he</u>	"and"	2	2.00	2	20.00	8.50	0.00
Others		8	3.00	8	17.50	1.13	0.13
Total:		36	3.06	36	9.17	2.72	1.56

The second observation is that, among the prepositional phrases, the beneficiary phrases marked by gei "for" have a shorter referential distance (2.12 vs. 3.33) and longer persistence (2.78 vs. 0.22) than the preceding NP. Compared with Table 8.1 and Table 8.2, the beneficiary phrases marked by gei also show a shorter referential distance than the NP in the NP-V(-S) sentences (2.78 vs. 6.36 for referential distance, and 2.78 vs. 1.20 for persistence), and than the first NP in the NP-V-NP sentences (2.78 vs. 3.69 for referential distance, and 2.78 vs. 2.38 for persistence). The only one destination phrase marked by gei "to" also has a longer persistence (1.00) than the preceding NP, but we need more cases to find out about its exact behavior.

The third observation from Table 8.4 is that the patient marker ba does not mark the NPs as more topical than

the first NPs. This supports the observation that the NP after ba is a secondary topic, not the primary topic. There are only three cases where the agent marker bei is used, which shows a low topicality with longer referential distance and zero persistence. We need more data to further study bei.

8.4.5 Phonological Size and Word Order

The data in Table 8.5 show the correlation between the phonological size, word order, and topicality. Since only two positions, i.e. preverbal vs. postverbal, are tested, the clauses surveyed are of the NP-V-NP type. The results for the definite and indefinite NPs are separately tabulated.

Table 8.5. Referential Distance and Persistence
Relative to Phonological Size and Word Order.

	<u>Ref. Distance</u>				<u>Persistence</u>			
	N	NP1	N	NP2	N	NP1	N	NP2
Definite:								
Zero anaphor	30	1.00	5	5.10	30	3.59	5	1.20
Res. mod. N	3	1.33	11	15.56	3	0.33	11	0.82
Name	16	2.19	4	9.76	16	2.38	4	5.33
Pronoun	12	3.92	1	1.00	12	2.58	1	3.00
Noun	5	12.80	7	10.44	5	0.40	7	0.71
Poss-N	0		5	12.40	0		5	2.00
Indefinite:								
Numeral-M-N	0		7	20.00	0		7	0.57
Modified ind.	0		2	18.00	0		2	0.50
Noun (nonref)	0		18	16.94	0		18	0.00

As seen in Table 8.5, definite NPs may appear either before or after the verb, but all the indefinite NPs,

including those with a numeral modifier, other indefinite modifier, and the nonreferential NPs, appear after the verb only. All the seven NPs with a numeral modifier, e.g. yi ge "one," are indefinite.

The data in Table 8.5 show that definiteness is marked more consistently by lexical devices than by word order in Chinese. Thus, in both the preverbal and postverbal positions, the zero anaphors, restrictively modified NPs, proper names, pronouns, NPs modified by a possessive, are definite, while the NPs modified by a numeral or other indefinite modifiers, e.g. you xie "some," are indefinite. Only the definiteness of the plain nouns, which are not modified by other lexical items, is marked by word order, i.e. definite before the verb, and indefinite after the verb.

Compared with indefinite NPs, the definite NPs, either before or after the verb, are more topical, with a shorter referential distance and longer persistence.

Within the definite group, the NPs with different phonological sizes show different degrees of topicality in the same position. The zero anaphor, in both preverbal and postverbal positions, presents a shorter referential distance than the other kinds of noun phrases. In contrast, the definite plain nouns have longer referential distance in both positions than the other types of NPs.

It is also seen that, in the preverbal position, the zero anaphors, restrictively modified NPs, and proper names all show a shorter referential distance and longer persistence than those after the verb, thus supporting the correspondence between word order and topicality.

Since there is only one postverbal pronoun in the data, it is hard to say that postverbal pronouns are more topical than the preverbal ones. The fact that the preverbal plain nouns are less topical than the postverbal plain nouns seemingly contradicts our expectation that more topical noun phrases appear earlier. On a closer look, this is only true if we just consider the definite noun phrases. When we also include the 18 nonreferential plain nouns, which all appear after the verb and show much longer referential distance and shorter persistence, preverbal plain nouns still show higher topicality than postverbal plain nouns.

8.5 Summary

In considering the topic continuity of a noun phrase in actual texts, the two factors, its relative position in the clause and its phonological size should be considered. The general tendency is to code more topical elements in an earlier position of the clause. The NPs of different phonological sizes also show different topicality in text. As illustrated in the discussion of the topicalized sentences, semantic factors may supersede word order in coding topicality.

To further understand the interaction between lexical semantics and discourse topic continuity, it is necessary to find an appropriate measurement that can statistically represent not only coreference, but also represent partial coreference and even lexical cohesion in general.

Notes

¹Phonological size, as used in Givon (1983), refers to the lexical make-up of a linguistic element. For instance, a full noun phrase is heavier than a pronoun, which is then heavier than a zero anaphor.

²The five articles surveyed are: (1) Ta-de Ai [Her Love] (People's Daily, Overseas Edition, April 24, 1989, p. 2); (2) Ren Zhi Si Nian Gai le San Zhuang Shuji Lou: Huihuo Gong Kuan Ershi Yu Wan Yinqi Gongfen [Building Three Secretary's Houses in Four Years in Power: Squandering More than 200,000 Yuan of Public Money to Arouse Public Indignation] (People's Daily, Overseas Edition, May 2, 1989, p. 1); (3) Yang Zhenning yu Yu Laoda [Zhenning Yang and the Fisherman] (People's Daily, Overseas Edition, May 3, 1989, p. 4); (4) Qimengzhe [Enlightener] (People's Daily, Overseas Edition, May 10, 1989, p. 2); and (5) Chang le Yi Beizi Jingju de Waiguo Ren [Foreigner Who has Sung Peking Opera All His Life] (People's Daily, Overseas Edition, July 6, 1989, p. 7). A sample part of each article is cited in Appendix.

³Since there are relatively few samples for the topicalized sentences, compared with the other sentence types, the tested results are much less accurate.

CHAPTER IX

LEARNING BETWEEN CHINESE AND ENGLISH

This chapter will examine the function of word order in light of interference in the learning of English by Chinese speakers and in the learning of Chinese by English speakers. It will show that emphasis on different devices in coding discourse functions can be reflected in transfer between the two languages. Chinese speakers may have more difficulty in learning English articles as a cohesion device in discourse, and English speakers may have more difficulty in using word order to achieve cohesion in Chinese.

9.1 Interference in Syntax

This section will look at the process of interference at the level of syntax.¹ When interference occurs, the result sentences can be ungrammatical.

9.1.1 Learning Chinese Word Order

Chinese is a mixed type of language in terms of word order, with the features from the SOV languages and VSO languages. Some of the SOV features in Chinese are shown in the orders of Modifier before Noun, and Modifier before Verb. Some of the VSO features in Chinese are Verb before

its object, and Preposition before Noun Phrase (cf. Section 3.8). Those orders can be illustrated in (9.1).

- (9.1) a. Ta zai jia kan na ben Zhongguo shu.
he at home read that M China book

"He reads that Chinese book at home."

- b. Na ben shu ta na dao jia li le.
that M book he take to home in LE

"He took that book home."

"That book, he took home."

In (9.1a), the agent noun phrase ta "he" takes the initial position, and the patient noun phrase na ben Zhongguo shu "that Chinese book," follows the verb. Within the noun phrase na ben Zhongguo shu, the modifier na ben "that copy" precedes the noun shu "book." The preposition phrase zai jia "at home" also precedes the verb phrase that it modifies in (9.1a).

The English translation in (9.1a) has the same SVO order and the order of modifier before noun. But the position of the preposition phrase in (9.1a) is different in the two languages, before the verb in Chinese, and after the verb in English. In Chinese, preposition phrases may also appear after the verb, especially with those preposition phrases indicating duration and destination, as shown in (9.1b), where the preposition phrase dao jia "to home" indicates the goal of the action and is thus placed after the verb. The patient noun phrase, na ben Zhongguo shu "that Chinese book," is placed in initial position in (9.1b). The

two English translations show that the patient noun phrase can either be at the beginning of the sentence or after the verb.

It has been shown in Chen (1984) that most of the mistakes in grammar made by Japanese speakers learning Chinese are with word order. My own examination of seven essays and six dialogues in Chinese (totaling about 4000 words) written by English speakers shows that English speakers learning Chinese also make considerable number of mistakes in word order. The numbers of different types of errors are shown in Table 9.1.

Table 9.1. Errors in Chinese Writings by English Speakers.

<u>Types of Errors</u>	<u>Numbers</u>
Word Order:	
Modifier after N	8
Question Phrases	2
Adverb after V	1
Initial Adverb	1
Duration before V	1
Patient before V	1
Categories:	
Verbs	5
Nouns	3
Adverbs	2
Prepositions	2
Measure Words	1
le	4
de	8
ma	1
Missing Characters	2
Spelling	2
Total:	44

It is shown in Table 9.1 that of 44 errors made by the English speakers who are learning Chinese, 14, or about 32% are with word order.

Of the 14 errors in word order, eight involve placing the modifier of a noun after the noun, as shown in (9.2).²

- (9.2) a. Tamen xiang jiehun, tan guanyu fazi de
they want marry talk about method MOD

jiehun.
marry

"They want to get married, (and) talk about the methods of getting married."

- b. Liang ge hao difang zai Meiguo shi
two M good place at America be

Sanfanshi gen Niuyue.
San Francisco and New York

"The two good places in America are San Francisco and New York."

In (9.2a), the phrase for "methods of getting married" should be jiehun de fazi, with the modifier jiehun de "of getting married" placed before the noun fazi "method." In (9.2b), the preposition phrase zai Meiguo "in America" modifying liang ge hao difang "two good places" should also precede the latter. Both Chinese and English share the order of modifier before modified, e.g. modifier-noun. But English also has the order of modifier following modified, as in the case of a preposition modifier. The errors with nominal modifiers show that the two variant orders in English cause a high interference in Chinese.

There are two errors with the position of question phrases, as illustrated in (9.3).

- (9.3) a. *Shenme difang ni jiehun?
 what place you marry

"Where do you get married?"

- b. *Ni yao jiehun shenme shihou?
 you want marry what time

"When do you want to get married?"

In (9.3a), the placement of the question phrase shenme difang "what place" at the beginning of the sentence is not acceptable in Chinese unless the question phrase is a focussed comment. The error is due to the regular placement of the question phrase at the beginning in English. In (9.3b), the placement of the question adverbial shenme shihou "what time" at the end of the sentence is not acceptable in Chinese, and the correct position is in front of the verb.³ This error possibly is due to the influence of the position of the English time phrases, which appear after the verb.

There are two cases where adverbs are wrongly placed, as shown in (9.4). In (9.4a), the adverb hen "very," which is supposed to describe you xingqu "be interested," is wrongly placed after the verb you. In (9.4b), the adverb jiu "then" should also be placed immediately before the verb phrase yao na ni "want to take you," as is the rule for most monosyllabic adverbs.

- (9.4) a. Wo chule yanjiu Zhongwen yiwai, ye dui
I besides study Chinese besides also to

niu, ma, ji, zhu you hen xingqu.
cow horse chicken pig have very interest

"Besides studying Chinese, I am also much
interested in cows, horses, chicken, and
pigs."

- b. Ruguo jiaoshi bu na ni, jiu shayu yao
if reef not take you then shark want

na ni.
take you

"If the reefs do not snatch you, sharks will."

The other two errors in word order are placing the
phrases for duration and patient before the verb, as shown
in (9.5).

- (9.5) a. Zai Beijing women san tian war le.
at Beijing we three day play LE

"We played for three days in Beijing."

- b. Bu zhidao shenme shuo.
not know what say

"But (I) do not know what to say."

The sentence in (9.5a) shows that the learner of Chinese has
not realized that phrases for duration and occurrence,
unlike the other temporal phrases, should follow the verb in
Chinese. Therefore in (9.5a), the duration san tian "three
days" should be placed after the verb war le "played." In
(9.5b), the question phrase shenme "what" should follow the
verb shuo "say."

9.1.2 Learning English Word Order

Now let us see how Chinese speakers learn English word order. To investigate the process of interference from Chinese to English, I made a survey of 29 essays of free writing in English (totaling about 6,000 words) by third-year college students majoring in English in a Chinese normal college.⁴ The number of mistakes for different categories are shown in Table 9.2. The statistics reveal that Chinese learners of English make more mistakes with category, such as the use of articles, tense-aspect markers, etc. than word order. The fact that there are only six errors in word order indicates that interference with regards to word order is significantly low, compared with the word order errors made by English speaker learning Chinese.

TABLE 9.2: Numbers of Mistakes Made by Chinese Learners of English.

<u>Types of Errors</u>	<u>Number</u>
Articles	33
Tense	26
Prepositions	22
Conjunctions	21
Suffixes	19
(excl. tense & number)	
Number for Ns	14
Dem. prons.	7
Word order	6
Person. prons.	3
Double neg.	2
<u>Total</u>	<u>153</u>

Four of the six errors in word order are with the position of adverbial phrases, as shown in (9.6).

- (9.6) a. Let us unite to defend the world peace and prevent the terrible war from again breaking out!
- b. When you live with him together, you will feel safe and happy.
- c. After the whole day working, our college yard and student's dormitory were no longer the same as before the dirty yard. (working the whole day)
- d. My sister saw off me to the station.

In (9.6a), the word order in again breaking out shows the influence of the regular Chinese order of adverb before the verb, and should be rewritten as breaking out again. In (9.6b), the word order in with you together in (9.6b) may be due to the fact that Chinese allows adverbs to appear either before or after a preposition phrase. The phrase whole day in (9.6c), which modifies the gerund working, should also be placed after the verb. The order of saw off me in (9.6d) should be rewritten as saw me off.

The two other errors are with the position of the modifier in a noun phrase, as shown in (9.7). In (9.7a), the 30th afternoon should be corrected as the afternoon of the 30th. In (9.7b), the ceremony of opening should be corrected as the opening ceremony.

- (9.7) a. The time passed quickly and on the 30th afternoon there was an ending form.

- b. On the morning of this day at nine o'clock the ceremony of opening began.

In (9.7a), the learner overuses the order of modifier before modified, which is the regular order in Chinese. In (9.7b), the learner overuses the preposition phrase. Both (9.7a) and (9.7b) are syntactically correct sentences, but they are inappropriate either due to an undesired meaning (9.7a), or due to the violation of a current usage (9.7b).

9.2 Topic and Definiteness in Chinese and English

Before we look at interference at the level of discourse with respect to the use of word order, let us first see how Chinese and English differ in terms of coding topic and definiteness.

Topic is what is being talked about (Chafe 1975; Bates and MacWhinney 1982). The selection of the topic depends on such factors as givenness (old or new information), perspective (background or foreground), and salience (vivid or inert). The clause topic can be realized in various ways, e.g. word order, verb agreement, ellipsis and pronominalization, definite and indefinite articles, contrastive stress, adverbials, and relative clauses (Bates & MacWhinney 1982).

Chinese differs from English in that Chinese codes the topic of a clause or sentence through word order more regularly than English does. Since the topic of a clause usually takes the initial position, Chinese has thus

acquired the title of a "topic-prominent language" (Li & Thompson 1974; Chafe 1975). For an illustration, see the sentences in (9.8).

- (9.8) a. Ta dapo chuanguhu le.
he break window LE

"He broke a window."

- b. Chuanguhu ta dapo le.
window he break LE

"The window, he broke it."

"The window was broken by him."

In (9.8a) the topic is ta "he" and in (9.8b) it is chuanguhu "the window." The examples show that Chinese marks the topic in a clause or sentence by preposing it.

The function of word order for coding topic can be seen more clearly if we examine word order in a text, rather than a sentence or clause. For instance, the last clause in (9.9) makes use of a bei-structure to topicalize the patient noun phrase of the verb xuan "elect."⁵ The whole passage is therefore more cohesive in that the individual clauses are all about the same topic Xu Fengxian (Hu et al. 1981:516).

- (9.9) Xu Fengxian shi chunjie shihou cai jia
Xu Fengxian BE spring festival time only marry

dao zhe cun lai de xin xifu, shi ge neng
to this village here MOD new wife BE a able

shuo hui gan de renwu, jia dao zheli bu
speak able act DE person marry to here not

ji tian, jiu bei xuan wei fu dui zhang le.
few days then BEI elect as vice team leader LE

"Xu Fengxian is a new wife that was married to this village as late as Spring Festival. (She) is a person speaking well and working well. Not long after she had been married here, she was elected vice-team leader."

While the clause topic is regularly indicated by word order in Chinese, the definiteness of the noun phrase is not so consistently coded. For instance, in both (9.8a) and (9.8b), the NP chuanghu "window" is not lexically marked as definite or indefinite. The NP chuanghu "window" has acquired a definite status when placed at the beginning (9.8b), but is indefinite when placed after the verb (9.8a). Some modifiers in Chinese also have the function of marking definite and indefinite NPs.⁶ For instance, the combination of a numeral and a measure word, e.g. yi ge "one/a (piece)," also marks indefiniteness, and the combination of a demonstrative and a measure word, e.g. zhe ge "this" and na ge "that," also mark definite noun phrases. This is shown in (9.10).

- (9.10) Na ge ren dapo le yi ge chuanghu.
 that M person break LE one M window

"That person broke a window."

As Wang (1980:467-8) argues, the use of such modifiers is often redundant, which, as in the case of many translations, is the result of the influence from Western languages. But those definite or indefinite markers have become more and more acceptable in modern usage. Since the modifiers can

also indicate other meanings such as number, contrast, or distance at the same time, and word order is also used to mark definiteness to a certain extent (cf. Section 5.1), those modifiers have not become regular markers for definiteness or indefiniteness.

English word order is also sensitive to topicality, the general tendency being to place the topic in the initial position. As the English translations in (9.8) show, the topic in initial position can be either the agent noun phrase, e.g. he in (9.8a), or the patient noun phrase, e.g. the window in (9.8b).⁷ But English does not depend on word order to code topic as consistently as Chinese does. When agent competes with topic for the initial position, more often than not it is the agent that takes the priority (Bates & MacWhinney 1982). What is more consistently coded in English is definiteness.⁸ The noun phrases that are definite are then more likely to be topics in discourse.

9.3 Learning Chinese Discourse

In the case of the English speakers learning Chinese, some modifiers for definiteness or indefiniteness are overused, but word order may not be sufficiently used to achieve textual cohesion.

The English speakers would overuse the newly developed definite and indefinite modifiers, such as yi ge "a/one," yi wei "a/one," and zhe ge "this." This is shown in the sentences in (9.11).

- (9.11) a. Xie Xiaohua xiaojie shi yi wei cong Zhongguo
Xie Xiaohua miss be one M from China

lai de yanjiu-sheng.
come MOD graduate student

"Miss Xie Xiaohua is a graduate student from China."

- b. Na ge shihou faxian wo you yi ge
that M time find I have one M

weibing.
stomach-disease

"At that time (I) found that I had stomach-trouble."

The sentences in (9.11), both written by English speakers, are fully grammatical. In (9.11a), the indefinite modifier yi wei "one" (an equivalent to yi ge but used for politeness) is acceptable, but not necessary. In (9.11b), the definite modifier, na ge "that," is obligatory since the noun phrase na ge shihou "that time" is definite. But the indefinite modifier yi ge "a/one" in the phrase yi ge weibing "a stomach trouble" is not acceptable, unless the speaker is answering a question as to the number of stomach diseases that he or she had at the time.

The overuse of definite or indefinite modifiers can also lower textual cohesion in discourse. For instance, although the individual clauses in (9.12) are all correct in terms of grammar, they do not form a cohesive unit due to the overuse of the definite phrase zhe ge.

(9.12) a. Qing nin kan zhe ge hong qiche.
please you see this M red car

b. Zhe ge you san-ge men!
this M have three door

c. Zhe ge shi "Chevrolet."
this M be Chevrolet

"Please look at this car. This one has three doors. This is a Chevrolet."

The first clause in (9.12a) is introducing a car to the listeners, where the phrase zhe ge "this" is deictic. But the use of the phrase again in (9.12b) and (9.12c) gives us an impression that the speaker is introducing not one, but three different cars. Textual cohesion is greatly enhanced if we delete zhe ge "this" in the latter two clauses, as shown in (9.13).

(9.13) a. Qing nin kan zhe ge hong qiche.
please you see this M red car

b. — you san-ge men!
have three door

c. — shi "Chevrolet."
be Chevrolet

"Please look at this car. (It) has three doors. (It) is a Chevrolet."

In addition to the overuse of articles in their target Chinese, English speakers would misuse topic-comment structures. Sometimes, the clauses that are perfect in isolation would be unacceptable when used in the given context. In (9.14) are some actual sentences written by English speakers who are studying Chinese. They are

presented below in (9.14), first without the context in which they were actually used.

- (9.14) a. Zhei xie ren dou you qiguai de mingzi.
this M person all have strange MOD name

"These people all have strange names."

- b. Ni dao dui de difang lai le.
you arrive right MOD place come LE

"You have come to the right place."

- c. Suoyi, xianzai wo you jia zai Foluolida.
therefore now I have home at Florida

"Therefore I now have a home in Florida."

- d. Wo zai Hangzhou yao jiehun.
I at Hangzhou want marry

"In Hangzhou I want to get married."

The sentence in (9.14a) is acceptable with the modifying phrase qiguai de "strange" placed before the noun mingzi "name." The sentence in (9.14b) is also correct to place the modifying phrase dui de "correct" in front of the noun difang "place." The sentences in (9.14c) and (9.14d) are grammatical with the prepositional phrases after the verb (9.14c) or before the auxiliary (9.14d).

All the sentences in (9.14) are actually used in passages written by students learning Chinese. But in the contexts in which they are used, all of them appear out of place, thus breaking down textual cohesion.

The actual linguistic context for the sentence in (9.14a) is given in (9.15).

- (9.15) A: Zhei xie ren dou you qiguai de mingzi.
this M person all have strange MOD name

"These people all have strange names."

- B: Di-yi lei de ren jiao shenme?
first base MOD person call what

"What is the name of the person in first base?"

- A: "Shenme" zai di-er lei. "Shei" zai di-yi
at second base at first

lei.
base

"Shenme is at second base. Shei is at first base."⁹

(9.14a) does not mark the phrase as a comment. Its final position in (9.16), however, clearly marks it as the main comment of the sentence.

The sentence in (9.14b) is also unacceptable in the given context, as shown in (9.17).

- (9.17) A: Wo yao mai dao Bali de piao.
I want buy arrive Paris MOD ticket

"I want to buy a ticket to Paris."

- B: Ni dao dui de difang lai le.
you arrive right MOD place come LE

"You have come to the right place."

The preceding context of (9.14b) shows that Speaker A is requesting a ticket to Paris. Speaker B then tells Speaker A that he is in the right place, i.e. the place where he can get the ticket he wants. The context requires that the dui "right" appear in the comment position in (9.14b). But in (9.14b), the dui "right" is placed before difang "place," which, as in the case of (9.14a), is a subordinate position, not a comment position. Two possible alternates for (9.14b) in the given context can be (9.18a) or (9.18b).

- (9.18) a. Ni lai dui difang le.
you come right place LE

"You have come to the right place."

- b. Zhei ge difang ni lai dui le.
this M place you come correct LE

"You have come to the right place here."

In (9.18a), the position after the verb lai "come" makes dui "right" as a comment. In (9.18b), the word dui "correct" is not only placed after the verb, but also after the location. Both are appropriate for the given context.

The author of (9.14c) is telling people that her home is far from Gainesville, Florida. Now that she has got two lovely dogs, she feels that finally she has a home in Florida. The first sentence in her narrative is (9.19a), the last one is (9.14c), which is reproduced as (9.19b).¹¹

- (9.19) a. Wo-de jia li zher yuan....
my home from here far

"My home is far from here...."

- b. Suoyi, xianzai wo you jia zai Foluolida.
therefore now I have home at Florida

"Therefore I now have a home in Florida."

In the given context, (9.19b) is not appropriate. The previous discourse is about the fact that the author does not have a home in Florida and that the puppies make her feel more at home now. But (9.19b) codes zai Foluolida "in Florida" as new information, which is actually old information and should be coded as a topic. On the other hand, you jia "have a home," which is new information, is not placed at the end of the sentence. The correction that I suggest is (9.20).

- (9.20) Suoyi, xianzai wo zai Foluolida you jia.
therefore now I at Florida have home

"Therefore I now have a home in Florida."

In the corrected (9.20), the verb phrase you jia "have a home" is now placed after the prepositional phrase zai Foluolida "in Florida," resulting in a better order of topic before comment.

The context of (9.14d) is given in (9.21).¹²

(9.21) A: Shenme difang ni jiehun?
what place you marry

"Where do you get married?"

B: Wo zai Hangzhou yao jiehun.
I at Hangzhou want marry

"In Hangzhou I want to get married."

Speaker B in (9.21) codes the prepositional phrase, i.e. "in Hangzhou," which contains the new information sought by Speaker A, as a more topical element. In terms of semantic scope (cf. Section 4.2), yao "want" should also have greater scope than the locative. The placement of zai Hangzhou "in Hangzhou" before yao "want" wrongly signals that the person's wanting to marry, not his marrying, takes place in Hangzhou. Two ways of revising it would be (9.22a) and (9.22b).

(9.22) a. Wo yao zai Hangzhou jiehun.
I want at Hangzhou marry

"I want to get married in Hangzhou."

b. Wo shi (yao) zai Hangzhou jiehun.
I SHI want at Hangzhou marry

"It is in Hangzhou that I want to get married."

In (9.22a), the prepositional phrase zai Hangzhou "in Hangzhou" is moved after the auxiliary yao "want." Because the prepositional phrase indicates static locative, it cannot be further moved after the verb jiehun "marry." In (9.22b), shi explicitly marks zai Hangzhou "in Hangzhou" as the focussed comment.

English speakers learning Chinese may find it even more difficult to use the correct word order for the individual clauses in a topic chain, as shown in (9.23a), which is what an English speaker wrote. The suggested correction is shown in (9.23b).

- (9.23) a. *Wo gen Daxue Yinhang you laiwang,
I with University Bank have business

haiyou ___ xiangdang jin...
also quite near

"I have business with University Bank, also (it) is quite near."

- b. Daxue Yinhang wo you laiwang,
university bank I have business

___ haiyou xiangdang jin...
also quite near

"As to University Bank, I have business (with it), (it) is also quite near."

It is difficult for the zero pronoun in the second clause in (9.23a) to corefer with the noun phrase Daxue Yinhang "University Bank," which is the complement of the

preposition gen "with." The most likely candidate for the chain topic then is wo "I," the primary topic in the first clause. But the second clause is apparently about "the bank," rather than "me." Therefore (9.23a) is not appropriate. My correction in (9.23b) places Daxue Yinhang "University Bank" at the beginning of the first clause, thus making it more likely to be the chain topic of the whole sentence.

9.4 Learning English Discourse

Now let us see how Chinese speakers learn English discourse. As Table 9.2 shows, the English articles cause many mistakes in the learning of English by Chinese speakers. Chu (1984c) and Johns (1984) also estimate that the mistakes that occur most frequently in the learning of English by Chinese speakers are with articles and pronouns. In (9.24) are two examples showing the mistakes actually made by Chinese learners in English composition.

- (9.24) a. Sports meet can promote physical culture and build up the people's health. (From my own data)
- b. Altogether, I examined 21 dialogues. As a result of preliminary study, I found complimenting appears most frequently in these dialogues. I copied each incidence under it. (From Johns 1984)

In (9.24a), an article is missing before the noun phrase sports meet, but this omission does not affect the interpretation of the paragraph. In (9.24b), the pronoun it

is ambiguous, since we cannot clearly infer whether the pronoun it refers to each of the "dialogues" or "complimenting" (Johns 1984:71). Both writers are at an advanced level in their acquisition of English. Still, they could not use articles and pronouns as well as native speakers.

It has been pointed out that Chinese speakers tend to overuse the topic-comment structures in their English writing (Krashen 1983:146; Rutherford 1983). Such transfer is possible because there is a universal tendency to resort to pragmatic strategies when using a second language in communication.¹³ Topic-comment structures are productive in Chinese, and it is easier for Chinese speakers to acquire the English word order of NP-Verb-NP without subject-verb agreement (Krashen 1983). Rutherford's (1983) survey shows that about 10% of the sentences in free writing by Chinese speakers have a topic that is not coded at the same time as subject in English, compared to 3% by Japanese and Korean speakers, and 2% for Arabic and Spanish speakers, respectively. Two of Rutherford's examples are shown in (9.25).

- (9.25) a. (All people can choose their mate in their own way.) These ways almost can classify two types.

(i.e. These ways almost [one] can classify [them] (into) two types.)

- b. A man chooses a wife is a man's business.

In (9.25a), the subject, i.e. the intended topic, is not the agent of the verb, and the sentence is ungrammatical. In (9.25b) a small clause is the topic, but is not appropriately marked as a subject, and therefore is also ungrammatical.

A more complex example is found in (9.26a).

- (9.26) a. Here I want to mention [that] my dormitory maybe was the cleanest one which was taken photos by the Organization.
- b. Here I want to mention [that] my dormitory maybe was the cleanest one and photos were taken by the Organization.

Apparently the writer of (9.26a) regards my dormitory as the topic in the relative clause and thus codes it as the subject. In the revised (9.26b), my dormitory is not coded as a subject in the relative clause.

When larger discourse units are considered, the overuse of topic-comment structures may affect the efficiency in communication. One essay written by a an intermediate-level Chinese learner, entitled My Future Wife, starts with the paragraph in (9.27).¹⁴

- (9.27) She is an able woman. At home, she can not only do all the household chores well but also put all the things in good order. After I enter my house, I will see: in the dining room, hot food is served on the table, and she is sitting at the table with a smile on her face waiting for me; in the sitting room, clothes are hanging on the clothes-rack....

In (9.27), four phrases that are not subjects are used in the initial position of the individual clauses, e.g. the prepositional phrases at home, in the dinning-room, and in the sitting room, and the subordinate clause after I enter into my house. There is nothing wrong with this use of preposing in terms of grammar. But still it reads clumsy. It is apparent that the writer is maximizing the use of the word order that is allowed in both English and Chinese. But in doing so, while the writer maintains a high level of proficiency in grammar, he fails to achieve the same level of proficiency in discourse.

Sometimes the sentences have the same topic in initial position, but the paragraph still appears clumsy to native speakers of English, as in the beginning part of a student's essay shown in (9.28).¹⁵

- (9.28) I have smoked for more than two years. Now I really feel that smoking does harm my health and have to give it up. I never smoked before I entered college. I can tell you how I began to smoke. That was....

The passage in (9.28) is grammatical. Notice that the initial NP in all the clauses except the second one is "I," lexicalized or not. The topicalization of the same noun phrase would be important in enhancing textual cohesion in Chinese, either suppressed or pronominalized in the latter sentences or clauses. But it does not contribute as much to cohesion in English.

9.5. Summary

The comparison between the learning of Chinese by speakers of English, and the learning of English by Chinese speakers helps to bring out the peculiar features of the Chinese language in syntax and discourse. Compared to English, Chinese presents a more consistent correspondence between word order and the discourse function of topic. This is indicated by the close relationship between the clause or sentence initial position and the discourse status of topic. In English, on the other hand, the initial position is split between coding agent and topic, and the function of topic is also coded by articles and pronouns. The study of the phenomena of interference is only beginning to uncover many such differences between different languages in achieving topic continuity.

Interference in discourse is different from that in syntax. While interference at the level of syntax may lead to ungrammaticality, interference at the level of discourse may lead to inappropriateness in a given linguistic context. Thus, individual clauses may be grammatical in isolation, as those in (9.14), but may not have appropriate topic-comment structures in discourse, as shown in the contexts (9.15), (9.17), (9.19), and (9.21).

As we have seen, learning the structure of discourse may turn out to be a more difficult task than learning syntax. Even when a learner of Chinese can write Chinese

sentences and clauses that are grammatical in isolation, it may still be a long way before he or she is able to select sentences and clauses that are appropriate in a given context.

Notes

¹Krashen (1983:146) claims that similar word orders in the native language and target language can cause transfer.

²The English translations are mine.

³Professor Chauncey Chu (personal communication) suggests that (9.3b) would be acceptable if it is treated as composed of two clauses, and has a pause between ni yao jiehun le "you are going to get married" and shenme shihou "when," as shown in (9n.1).

(9n.1) Ni yao jiehun le, shenme shihou?
you want marry LE what time

"You are going to get married. When?"

⁴I should thank Mr. Brian Jillette for providing me with the English essays.

⁵Besides marking the patient or locative as the primary topic of the clause, bei is also needed when the verb is perceived with an adverse effect on the patient or locative.

⁶Wang (1980:283-264; 464-468) discusses the development of the definite and indefinite modifiers in Chinese.

⁷In both the Chinese topicalized sentence of (9.8b) and its English translation, the placement of the patient "window" in the initial position may also indicate contrast and emphasis as well as the primary topic.

⁸The five studies reported in Bates and MacWhinney (1982) indicate that the English articles, i.e. the and a/an, regularly code given information and new information respectively. As Chu (1984c) points out, English mainly uses articles and pronouns to maintain coherence in discourse.

⁹The players' name are strange because Shenme in Chinese means "what" and Shei means "who," which are used by

the student to show some sense of humor. They are neither actual surnames, nor commonly used first names.

¹⁰This difference between English and Chinese was first discussed in Chu (1978).

¹¹The full context of (9.19) is shown in (9n.2).

(9n.2) Wo-de jia li zher yuan. Mei nian wo gen
 my home from here far every year I with
 wo-de liang ge gou zuo che dao nar gu liang
 my two M dog ride car to there go two
 ci. Wo dao Foluolida lai de shihou yijing you
 time I to Florida come MOD time already have
 yi ge xiao gou. Suiran ta liu sui, keshi ta
 one M small dog though it six year but it
 hen xiao. Qunian sanyue zai lu shang wo
 very small last year March at way on I
 yujian biede gou. Wo yujian de shihou, ta shi
 see other dog I see MOD time it be
 yi ge xiao gou, mei you jia. Xianzai ta zhang
 one M small dog not have home now it grow
 de hen da. Wode gou dou hen hao, ye dou
 DE very big my dog both very good also both
 keqi. Xiao gou jiao "Poochie," da gou jiao
 polite small dog name big dog name
 "Sammy." Suoyi, xianzai wo you jia zai
 therefore now I have home at
 Foluolida.
 Florida

"My home is far from here. Every year I go there twice by car with my two dogs. I already had a puppy when I came to Florida. Though it was six years old, it was very small. I came upon the other dog on the road in March last year. When I saw it, it was a small puppy, having no home. Now it has grown very big. My dogs are both very good, also very polite. The small one is called Poochie, the big one Sammy. Therefore I now have a home in Florida."

¹²The question "shenme difang ni jiehun?" can be better rephrased as (9n.3).

(9n.3) Ni zai shenme difang jiehu?
you at what place marry

"Where do you get married?"

¹³Klein (1986:82-83) generalizes three pragmatic principles that guide the learners of a second language: (1) place what is given before what is new, (2) place theme (what is talked about) before rheme (what is said about it), and (3) place the oriental element at the beginning of a sentence. This could be summarized as: place topic before comment. Such transfer at the sentence level also takes place in the learning of English by French speakers, who would also overuse topic-comment structures in their English (Trevisi 1986). Now we see that this tendency is carried out to different degrees in the learning of English by Chinese speakers and the learning of Chinese by English speakers.

¹⁴One possible revision of (9.27) is shown in (9n.4).

(9n.4) She is an able woman. She can not only do all the household chores well but can also put all the things in good order. When I enter my house, I will see hot food is served on the table in the dining room and she is sitting at the table with a smile on her face, waiting for me; clothes are hanging on the clothes-rack in the sitting room....

¹⁵One possible revision of (9.28) is shown in (9n.5).

(9n.5) After smoking for more than two years I now really feel that smoking does harm my health and I have to give it up. I never smoked before entering college. Now I can tell you how I started it. That was....

In (9n.5), the first clause is subordinated to the second clause. Also it is used instead of to smoke. The revision is intended to show that English relies more on clause combination and pronominalization to achieve cohesion.

CHAPTER X CONCLUSION

This study has attempted to combine different approaches in describing the function of word order in Mandarin Chinese. It has shown that, besides obeying formal patterns, the word order of a sentence or clause in Mandarin Chinese also reflects such semantic factors as case roles, scope, and temporal sequence. The word order of a sentence or clause is also subject to the discourse factor of definiteness, with the general tendency of placing definite elements before indefinite elements. The choice of different word orders for the individual clauses helps to achieve cohesion of the larger discourse units.

Hence the function of word order in Mandarin Chinese is seen at three linguistic aspects: in syntax where word order is sensitive to the categorial difference between the phrases; in semantic proposition where word order brings out the semantic relationship between the phrases in a clause; and in discourse where word order conveys topic-comment structures in order to achieve cohesion.

This study has assumed that certain formal rules can be discovered in the description of word order. The rules set up in Chapter III explicitly restrict the number and

position of various phrases that can be used in a sentence or clause. As we have seen, there can be one or more noun phrases before or after the verb. The position of the preposition phrases is also very flexible. They can be placed at the beginning, between a noun phrase and the verb, or after the verb. The formal rules also specify the relative position of the noun phrases and preposition phrases after the verb. Formal description is necessary even though it may overgenerate and accept the word order patterns that may not be actually used.

Semantic factors are also expressed by word order in the language. The relative order of the noun phrases and preposition phrases is closely related to the case roles they bear to the verb. For instance, when two noun phrases appear before the verb, the one closer to the verb tends to be agent, while the first one tends to be patient. The relative order is also influenced by the semantic scope of the phrases involved. The overall tendency in Chinese is to place the elements with larger scope before those with smaller scope, especially when they share the same case role. The principle of temporal sequence has also been illustrated in the sample sentences.

The individual clauses not only show the propositional meaning as to who does what when, etc., but also show the distribution of information in discourse. Chinese is topic-prominent since its word order consistently indicates the

status of topic and comment. This study has described various types of topic structures in Mandarin Chinese, e.g. the ba-sentence with a primary topic and a secondary topic, and the shi...de structure with the reverse order of topic after comment. But the structure with a descriptive clause after the complement noun phrase, as shown in (10.1), was not considered as a simple structure in Chapter VI.

- (10.1) a. You ren lai le.
 there be person come LE

"There is someone coming."

- b. Wo kanjian yi ge xuesheng hen you-qu.
 I see one M student very funny

"I saw a student, who was very funny."

However, the sentences in (10.1) can be treated as topic chains. The structure in (10.1a) is a topic chain with two clauses, i.e. you ren "there is someone" and lai le "come." Similarly, the structure in (10.1b) is also a topic chain with two clauses, i.e. wo kanjian yi ge xuesheng "I saw a student" and hen you-qu "very funny." The chain topic of (10.1a) is ren "person," and the chain topic of (10.1b) is yi ge xuesheng "a student." The chain topics are not expressed in the second clause.

As word order is usually consistent in coding topic and comment in Chinese, it is an important cohesive device between clauses in discourse. This is shown in the correspondence between the relative position of a topic in a

clause and its likelihood to be the higher topic in a larger discourse unit, e.g. a topic chain. The correspondence between the position of a noun phrase or preposition phrase and their topicality in the larger discourse unit has also been brought out by the statistical analysis of the actual texts in Chapter VIII.

The consideration of word order in terms of all three levels--syntax, semantics, and discourse--is necessary for the understanding of the mechanism that affects various word order patterns used in Chinese. This consideration complements the formalist approach in further limiting the actual number of elements and their possible positions in a clause. The study of the function of word order in Chinese may thus help to explain the principles governing syntax and discourse in general.

Some of the questions to be further considered about the function of word order may include a more detailed investigation of different structures, a more accurate numerical measurement of topicality, and a survey of a much larger data base.

APPENDIX
SAMPLE DATA FOR CHAPTER VIII

1. Ta-de Ai [Her Love]

Li Li, ta tai putong le, putong de jiu xiang
she too ordinary LE ordinary DE just like

yuzhou zhong de yi li chen'ai, yiyuan zhong de yi li
universe in MOD one M dust hospital in MOD one M

yaopin. Ershi-yi sui, zheng shi doukou-nianhua, cong
medicine twenty-one year just be bloom of life from

huxiao biye hou ta fenpei dao Beijing
nursing school graduate after she assign to

Junqu Zong Yiyuan Nei Si Ke.
military area general hospital internal four department

Zheli bei renmen cheng wei "tanhuan bingfang," sanshi si
here AGT people call as paralyzed wards thirty-four

zhang changwei, naoxueshuan, naoyixue,
M bed cerebrothrombus cerebral hemorrhage

wanqi-naoliu deng wochuang bingren zhan le
advanced cerebroma etc. bedridden patient take LE

baifenzhi qishi, mei ge ban yao dingqi gei
percent 70 each M shift would regularly for

bingren fan si ci shen, huan yi bai duo kuai
patient turn four time body chang one hundred more M

niaobu, laihui wanyao jiu yao yong liang ge duo
diaper up-down bend back would require use two M more

xiaoshi.
hour

Shen qiu shijie de yi tian, menzhen
late autumn time MOD one day out-patient department

songlai yi wei huan naoxue-shuan de Zhang Dabo, ta
 send one M suffer cerebrothrombus MOD uncle he

jin bingfang hou de diyi ju hua jiu chong-zhe
 enter wards after MOD first M utterance just towards

hushi han-dao: "Gunkai, wo bu zhi bing, wo bu xiang
 nurse shout get away I not cure disease I not want

huo le." Hushi gei ta shi tiwen, ta manheng-de ba
 live LE nurse for he take temperature he rudely PAT

tiwenbiao shuai zai di shang, hushi gei ta ce
 thermometer throw at ground on nurse for he measure

xueya, ta sihuo bu ken tuo xiuzi. Zhang
 blood pressure he anyway not like take off sleeve

Dabo zicong chuxian piantan hou, piqi bian de
 uncle since appear hemiplegia after temper become DE

shifen guguai, kan shenme shiqing dou bu-shunyan, fancai
 very odd see what thing all offensive food

de xiandan, beiru de houbo, yaopian de
 POSS saltiness quilts sheets POSS thickness tablet POSS

kutian, dou chengwei ta fa piqi ma
 bitterness and sweetness all become he throw temper scold

ren de liyou. Xuduo hushi dou bu yuanyi zoujin ta-de
 people MOD reason many nurse all not like enter his

bingfang, Li Li que yingzhe ma sheng shang, ta yi
 room however towards scold sound go she with

kuanhou de xionghuai zhunzhun youdao, rang bingren
 broad MOD heart earnestly instruct let patient

paixie xin zhong de jiyu he kumen.
 release heart in MOD piled-up depression and bitterness

"Li Li, she is too ordinary, as ordinary as a dust in the universe, a tablet of medicine in the hospital. At the age of twenty-one, just the bloom of her life, she graduated from nursing school and was assigned to the Fourth Department of Internal Medicine, General Hospital of Beijing

Military Command. This place was called Paralysed Ward and, of 34 beds, 70% were taken by patients bedridden with cerebrothrombus, cerebral hemorrhage, advanced cerebroma, etc. On every shift, (the nurses) should regularly turn over each patient four times and change over a hundred diapers. Bending up and down alone would take more than two hours.

"One day in late autumn, the Outpatient Department sent over a certain Uncle Zhang with cerebrothrombus. After he entered the wards, the first words he shouted to the nurses were: "Go away. I don't want to be treated. I don't want to live any more." When the nurses took his temperature, he threw the thermometer to the ground; when the nurses measured his blood pressure, he did not want to slip out of his sleeve anyway. After he began to suffer from hemiplegia in his illness, Zhang's temperament became very odd, seeing everything as offensive. The saltiness of the food, the thickness of the quilts and sheets, and the bitterness and sweetness of the medicinal tablets would all become the reason for him to throw a temper and scold people. Many nurses did not like to enter his room. But facing the curses, Li Li would go ahead, and earnestly instructed the patient with a broad heart, allowing him to release the piled-up depression and bitterness in his heart."

2. Ren Zhi Si Nian Gai le San Zhuang Shuiji Lou: Huihuo Gong Kuan Ershi Yu Wan Yingi Gongfen [Building Three Secretary's Residence Houses in Four Years in Power: Squandering More than 200,000 Yuan of Public Fund to Arouse Public Indignation]

Zai Fujian Zhangzhou Shi, bushao ganbu xiang jizhe
at city many cadre to reporter

fanying: Zhangzhou Shiwei Shuji Zhang Wenliang,
report city committee secretary

ren zhi si nian, huihuo guojia ershi duo
take office four year squander state twenty more

wan yuan, xianhou wei ziji jianzao san
ten thousand yuan one after another for self build three

zhuang xin lou. Jinnian chu, ta wushi Zhongyang
M new house this year beginning he defy central

sanling-wushen ganbu weizheng yao qinglian,
repeated injunctions official in office must clean

ban jin le qunian suimo wei ta jian cheng de
move in LE last year end of year for he build finish MOD

yi zhuang bieshushi xiaolou. Jizhe jiu ci xiang
one M villa-styled building reporter on this to

Zhonggong Fujian Shengwei xie le
Chinese Communist Party Provincial Committee write LE

qingkuang fanying, Shengwei Shuji
state of affairs report Provincial Committee secretary

Chen Guangyi Tongzhi xunji pishi yao renzhen
comrade immediately write orders must seriously

chachu.
deal with

Zhang Wenliang de xin ju, jian yu yi-jiu-ba-ba
POSS new house build at 1988

nian xia ban nian quan guo yasuo
year latter half year whole country reduce

jijian touzi zhiji, dongyong le guojia
capital construction investment time use LE state

zijin shi wan duo yuan. Dan ta-de xingjian,
fund ten ten thousand more yuan but its construction

jing meiyou na dao Shiwei Changwei-hui
even not take to city committee standing committee

yi-yi-yi, lian Shizhang jian Shiwei Fushuji
 discuss even mayor and city committee vice-secretary

Han Yulin dou bu zhidao. Zhe zhuang xiaolou shi Zhang
 all not know this M building SHI

Wenliang zhijie zhihui shi zhengfu yi wei
 directly command city government one M

fumishuzhang zuzhi sheji shigong de.
 vice-secretary-general organize design build DE

Han Yulin fanxian hou, tichu liji ting jian.
 find out after request immediately stop build

Zhang Wenliang bujin bu ting jian, hai tigao jianzhu
 not only not stop build also raise building

biaozhun.
 standards

"In Zhangzhou City, Fujian Province, many cadres told the reporters that the Zhangzhou City Party Committee Secretary Zhang Wenliang, in the four years when he was in the position, squandered over 200,000 yuan of state fund and built for himself three new houses one after another. Early this year, he defied the repeated injunctions of the Central Party Committee that officials must be free from corruption when in power and moved into a villa-styled building that was built for him later last year. The reporters wrote a report on the state of affairs to the Fujian Provincial Party Committee on this matter, and the Provincial Party Committee Secretary Comrade Chen Guangyi immediately wrote his orders that this matter be seriously dealt with.

"Zhang's new house was built in the latter half of 1988, when the investment in capital construction was

reduced across the country. The building cost over 100,000 yuan of state fund. But its construction was not even taken to the City Party Committee's Standing Committee for a discussion, and even Han Yulin, Mayor and Vice-Secretary of the City Party Committee, knew nothing about it. It was Zhang who directly commanded a vice-secretary-general of the city government to organize the designing and construction of this house. When Han knew about the project, he requested that the construction be stopped immediately. But Zhang not only ignored the request, but even raised the building standards."

3. Yang Zhenning yu Yu Laoda [C. N. Yang and the Fisherman]

Jinnian eryue chu, Zhejiang Sheng
this year February beginning province

Zhoushan Shi Putuo Qu Xiashi Dao de buyu
city district island POSS fishing

chuan laoda Zhuang Longzhu, you shoudao le shijie
boat master again receive LE world

zhuming wulixuejia Yang Zhenning Boshi de laixin.
famous physicist doctor DE letter

Yi ge putong-de yuchuan laoda he shijie zhuming
one M ordinary fishing boat master and world famous

kexuejia shi zenyang jiaoshang pengyou de ne? Shiqing hai
scientist SHI how make friend DE Q story still

dei cong yi-jiu-ba-wu nian jiang qi.
must from 1985 year tell begin

Na shi yi-yue shang xun, Zhuang Longzhu qu Jilin,
that be January first third go to

Liaoning, Heilongjiang deng di lianxi jianzao
etc. place contact build

yulun suo-xu de zijin, wuzi, ban wan
fishing vessel needed MOD fund material do finish

shiqing hou, cong Beijing cheng feiji jing Shanghai
business after from take plane via

hui jia.
return home

Zai Shoudu Jichang Chengke chuan-liu-bu-xi.
at Capital Airport passenger come in an endless stream

Zhuang Laoda faxian you wei chengke xiedai de
master see there be M passenger carry MOD

xingli tebie duo, sui you yi ming siji he lingwai
luggage very much though there be one M driver and other

yi ren songxing, dan ye shifen chenzhong bu-bian.
one person see off but still very heavy inconvenient

Ta er-hua-mei-shuo, jiu zhudong bangzhu na ren ba
he say no words just volunteer help that man PAT

xingli song jin le houjishi.
luggage send in LE waiting room

"Early last February, Zhuang Longzhu, the master of a fishing boat at Xiashi Island, Putuo District, Zhoushan City, Zhejiang Province, received another letter from the world-famous physicist Dr. C. N. Yang.

"How come that an ordinary fishing boat master has made friends with the world-famous physicist? We must start the story from 1985.

"Early January, Zhuang Longzhu went to Jilin, Liaoning, Heilongjiang, and other places to make contacts about the fund and materials needed for building fishing boats. When he had done the business, he was returning home from Beijing via Shanghai by plane.

"At Capital Airport, passengers were coming in an endless stream. Zhuang saw a passenger carrying too many pieces of luggage. Although there was a driver and another person seeing him off, the passenger still found the luggage very heavy and inconvenient to move around. Without saying anything, Zhuang volunteered to help that man take the luggage to the waiting room."

4. Qimengzhe [Enlightener]

Jin Jialin shi yi ge ting suihe-de ren, suihe-de
be one M fairly amiable person amiable

jihu yu-shi-wu-zheng, ta dai-zhe "gaoji
almost hold himself aloof from the world he with senior

jiaoshi" de zhicheng, zideqile-de zai yi ge pijing-de
teacher MOD title contentedly at one M secluded

shaonian huodong zhongxin jiao haizi-men tan qin,
youth activity center teach children play piano

hua hua. Ta bu shi zai zher zheng "waikuai," zhe
paint picture he not SHI at here earn extra income this

shi ta-de zhengshi zhiye.
be his official profession

Jin Jialin ye shi yi ge xiangdang zhi'ao-de ren,
also be one M rather stubborn person

yi-jiu-wu-qi nian cong Beijing Shifan Zhuanke-xuexiao
1957 year from normal school

biye hou, ta jiu yizhi dang jiaoshi, zhu jiao
graduate after he only always be teacher chiefly teach

yinyue he meishu. Duoshao ci, shi jihui lai zhao ta,
music and fine arts how many time SHI chance come find he

rang ta duokai you qiong you lei de xiao-xuexiao,
let he leave both poor and tiring MOD elementary school

er ta ne?--lian zhong-xue dou bu qu, jiu shi yao gan
but he Q even middle school all not go just SHI want do

qimeng jiaoyu.
elementary education

"Jin Jialin is an amiable man, so amiable that he almost holds himself aloof from the world. With the title of "senior instructor," he contentedly teaches children to play the piano and to paint at a secluded youth activities center. He is not earning some "extra income." This is his official profession.

"Jin Jialin also is a rather stubborn man. Ever since graduating from Beijing Normal School, he has been teaching all the time. He is in charge of teaching music and fine arts. Many times his opportunity came to him, allowing him to leave the elementary school which is both poor and tiring. But what did he do? He does not even want to teach a middle school. He just wants to work in elementary education."

5. Chang le Yi Beizi Jingju de Waiguo Ren [Foreigner Who Has Sung Peking Opera All His Life]

Tandao jingju jie de mingliu, Zhongguo
talk of Beijing opera circle POSS celebrities China

de jingju-mi-men dagai dou neng shu chu yi da
POSS Beijing opera fads maybe all can count out one long

chuan mingzi lai. Keshi, nin tingshuo guo ma? Zai Zhongguo
list name DIR but you hear say EXP Q at China

de jingju wutai shang, jing you yi wei waiguo-
POSS Beijing opera stage on even there be one M foreign

ren duguo le sishi nian de yishu shengya. Ci ren
person spend LE forty year MOD artist's career this person

xian wei Hubei Sheng Xiju Xuexiao laoshi, shi yi wei
now be Province opera school teacher be one M

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BIOGRAPHICAL SKETCH

Mingliang Hu was born in Taiyuan City, Shanxi Province, the People's Republic of China. After graduating from Shanxi Teachers' College as an English major in 1979, he taught English for one semester at Shanxi Medical College in 1980. He began his postgraduate study in English linguistics at Shanxi University in August, 1980 and graduated in December, 1982. From 1982 to 1984, he taught English reading in the Department of Foreign Languages, Shanxi University.

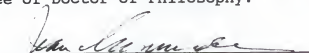
In January, 1985, he went to study linguistics at the University of South Carolina. Later in August, 1986, he was enrolled in the Program in Linguistics at the University of Florida. He also served as a teaching assistant in Chinese (Fall 1986-Fall 1991) and linguistics (Summer B 1987 and Summer A and B 1988) at the University.

He married Kehua Hu, China, in 1982. They have a son, Boyang Hu, born in 1988 in Gainesville, Florida.

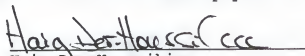
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Chauncey C. Chu, Chairman
Professor of Linguistics

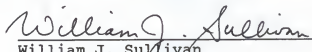
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Jean Casagrande
Professor of Linguistics

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


Haig Der-Houssikian
Professor of Linguistics

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


William J. Sullivan
Associate Professor of
Linguistics

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


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This dissertation was submitted to the Graduate Faculty of the Program in Linguistics in the College of Liberal Arts and Sciences and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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